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RHODE ISLAND COMMERCIAL FISHING AND SEAFOOD INDUSTRIES - THE DEVELOPMENT OF AN INDUSTRY PROFILE

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Final Report

Profile Introduction

Rhode Island has a diverse and dynamic commercial fishing and seafood industry. These characteristics are evident in the spectrum of species harvested, processed, and distributed. Geographically located at the northern boundary of the Mid-Atlantic area and the southern portion of New England, the Rhode Island commercial fishing and seafood industries have taken advantage of this positioning to effectively target a broad range of species common to each region. Beginning with species that were once described as underutilized, Rhode Island commercial fishermen have successfully been able to develop Loligo and Illex squid, Atlantic mackerel, herring, butterfish, whiting and lobster fisheries. The shellfish of the Narragansett Bay complex continue to support an active in-shore shellfishery while at the same time, the important Southern New England (SNE) multispecies groundfish fishery is depended upon for substantial revenue and effort.

This report presents the results of a study intended to develop a preliminary profile of the Rhode Island commercial fishing and seafood industries to include every pertinent activity and level of the current related function and participation by industry, government agencies, research institutions and fishery management from all quarters. The study was initiated and sponsored by the Rhode Island Commercial Fisheries Research Foundation (CFRF) and conducted in consultation with an appointed Project Steering Committee comprised of representatives of the RI commercial fishing industry, federal and state agencies, the RI General Assembly, and the CFRF Board of Directors. The principle questions posed were:

- Who is engaged in the commercial fishing industry in Rhode Island, and what types of jobs, businesses, skills, and investments are involved?
- How does Rhode Island's current harvesting and processing capacity relate to resource availability?
- How much income is generated and how much does commercial fishing contribute to Rhode Island's overall economy?
- How is commercial fishing activity distributed through the state, and how is it geographically related to marine waters off of Rhode Island's coastline?
- What state agencies, academic institutions, and private organizations are involved in supporting the commercial fishing industry in the state, what types of activities do they undertake, how many and what types of positions are involved, and what level of funding is invested in these entities?

Targeted information areas included: 1) Harvesting and processing capacity; 2) Available resources; 3) Economic significance of fishing industry; 4) Geographic distribution; 5) Demographic characteristics of fishing industry participants; and 6) Fisheries management and research investments.
The study team, to the extent possible, responded to these specific subject areas and the profile format presents the requested information.

Several studies, reports, and datasets were used for profile development purposes. The primary databases from which much of the quantitative data were generated, queried, or assembled from include: the Federal Vessel Trip Report (VTR); State Catch and Effort Logbooks (SAFIS eTRIPS); and the mandated SAFIS dealer report (eDR) databases. Because searches of existing information or research on commercial fishermen demographics and the RI seafood processing industry produced limited data, the study team also conducted industry surveys to help understand these important profile areas. The profile presents the most current and best available information and data generated analysis, which the study methodology and outreach produced. As noted, the three sets of data from the primary databases (Federal VTR database, SAFIS eTrips, SAFIS eDER) used were mandated Federal VTRs, State Catch and Effort Logbooks, and Dealer Reports. These reports depend on industry self-reported data inputs. VTRs and Catch and Effort Logbooks are completed by commercial fishermen and report fishing trip activity, areas being fished, and results of fishing effort. Dealer Reports are

submitted by RI and federally licensed dealers that primarily track landings by species, volume, and value. Errors of omission and incorrect data being entered occur. Audits of both submissions are conducted to identify and correct detected errors including reconciliation process for both databases to correlate and proof the results. In instances where the number of commercial fishermen or vessels within a fishery or the number of involved dealers is limited, a higher level of accuracy is understandably more likely for both reports. Because this data is self-reported, improvement efforts should be directed at remedial training and education of the individuals responsible for report submission.

As advised by the members of the Project Steering Committee, the profile descriptions presented encompass the most current periods of available information, which is most often from years, 2010, and 2011. For perspective, where important specific trends are needed, quantified background has been included, and for readers interested in more information - the data sources used are identified and can be searched for more details or expanded to other subject data not reported. Tables, graphs, and charts have been used throughout the report to concisely present information, and to facilitate future profile upgrades and allow for easy incorporation of necessary changes.

After more than three decades of federal and state required fishery management regimes and actions, the resulting uneven impacts have proven to be problematic for the Rhode Island commercial fishing industry. With the recent outcomes of fisheries management producing decidedly downward trends, as measured by overall fishery landings and value, the commercial fishing industry's (overall) economic performance and contributions to greater Rhode Island's economy has declined. The commercial harvesting sector has been arguably most affected with declines seen in total fishery landings value and volume, individual species composition, number of commercial fishermen and vessels, total fishing effort, and community commercial fishing dependency. The overall decline has affected the upstream shore-side infrastructure to the extent they are directly dependent on fishery landings within the state and activity of vessels home-ported in Rhode Island. These entities would include dealers, processors, retailers, vessel repair and maintenance, gear constructional repair, engine, deck machinery and electronic equipment repair and service. From 2006 to 2010, reported Rhode Island landings declined from $98.5 million to $60.4 million - a 38% reduction in landing value (unadjusted for inflation). The last year that Rhode Island landings were below $60 million was in 1982 when RI landings were valued at $56.7 million (when this adjusted for inflation this landing value would equate to about $126 million in today's dollars). The commercial fishing fleet as reported by the 2011 RI Vessel Declaration List, which includes state and federally permitted vessels, declined 16% from 2005 to 2011. Other analyses reported confirm the number of commercial vessels is contracting and an aging fleet is emerging. Total fishing effort as measured by number of fishing trips has understandably lessened as have the number of reported active commercial fishermen. Commercial fishing effort by individual fishermen or vessels for 2010 is not known, but according to survey findings may have in fact, increased in certain fisheries in order to maintain economic viability.

Commercial fishing and seafood industry contributions to the Rhode Island economy vary widely according to the available economic estimates. The most current and newly developed NMFS econometric model estimates the contributions of Rhode Island landings to the state's economy for all sectors in 2010 equated to: total sales of $150.4 million; total income of $106.4 million; and total employment of 4,968. Missing from the above estimates are the value of fish caught by Rhode Island home- ported vessels landed in other states - worth about $10 million (ex-vessel) in 2010 and assumed to have a similar economic impact at the harvester level as fish landed in state. Additionally, fish shipped into the state for processing and distribution (value added) totaled 44 million pounds and was worth about $30 million according to key survey respondents. Significant amounts of seafood imports entering the RI distribution chain also contribute to economic activity and are not recorded. The sum of the above unaccounted for commercial fishery contributions suggest that the related economy is more than marginally under-valued and that a more comprehensive quantitative analysis is needed.

Using the same NMFS Econometric Models and including the missing data identified above, results in an estimate or total 2010 value of sales or fish in Rhode Island of $200.9 million. This includes sales associated with fish landed in Rhode Island and by Rhode Island home-ported vessels, and transactions for primary dealers/processors, secondary wholesales/distributers, restaurants, and grocers. This figure does not include the sales associated with fish imports, which total an additional $562.3 million in sales.

Based on the statewide shore-side infrastructure assessment and inventory developed for the profile, there appears to be adequate fishing industry dependent support services to meet the needs of all related commercial fishing activity across the board.

Community dependency on commercial fishing and seafood industries is statewide and encompasses all counties and most towns in varying ways and at different levels. The state managed commercial ports in Point Judith and Newport are well maintained (within budget restrictions) and facilitate access to needed support services commensurate with commercial fishing activity at both locations.

As a group, commercial fishermen can be difficult to characterize demographically, and this proved to be true when searching for current human dimension descriptions for Rhode Island commercial fishermen. To fill this void, the study team relied upon dockside intercept and online survey techniques to collect information and establish a demographic benchmark from which to proceed. The overall findings of this work are in line with earlier research referenced within the study. The overall commercial fishermen population is declining and their average age is increasing. The simple and obvious reasons are that access to most fisheries is limited, attrition is occurring, and there is little opportunity for new recruitment. At the same time, underlying demographic factors such as education levels, ethnicity, residency, and family income dependency remain relatively constant as compared to earlier reports. Crewman population, in terms of the number of crew positions and actual individuals, is elusive because there is not a crewman tracking mechanism.

Fishery management and public investment in Rhode Island's commercial fishing industry is extensive. At the forefront of fisheries management actions is the Marine Fisheries Section within the Division of Fish and Wildlife of the Rhode Island Department of Environmental Management (RIDEM). RIDEM's responsibilities include fishery management and regulatory enforcement, monitoring of mandatory dealer, VTR, Catch and Effort Logbook reporting, and monitoring and management of the state's two commercial port facilities in Point Judith and Newport. There are several other entities within the state including academic and research institutions, and private organizations that have prominent roles and are invested and committed to commercial fishing interests. These are described to the extent that time allowed.

In the hope that a picture is truly worth a thousand words, two short video links are included in the profile: Freezer Trawler Focus and Point Judith Visions. These visualizations are intended to give profile readers a tangible narrative reference. Finally, the following report is based on what was considered to be a pilot study aimed at uncovering a methodology to develop this type of industry profile in other states within the region, and at providing a structure for information that can be readily updated and augmented. To this end, the study team has identified additional data and information needs for future consideration and a detailed description of profile methodologies that can be used to update this study and assist others who may want to conduct similar profiling.

Acknowledgements

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This project could not have been completed without the significant contributions of all of the above named individuals and many others not mentioned. CCE takes full responsibility for omissions, errors, and interpretation of the information presented.

List of Abbreviations

ABC=Allowable Biological Catch
ASMFC = Atlantic States Marine Fisheries Council
CFRF = Commercial Fisheries Research Foundation
CRMC = Coastal Resources Management Council
CSF = Community Sustainable Fishery
DAH=Domestic Annual Harvest
DAS = Days at Sea
EPA = Environmental Protection Agency
eDR = Electronic Dealer Reporting (SAFIS)
eTRIPS = Electronic Vessel Trip Reporting (SAFIS)
FMP = Fishery Management Plan
FT = Feet
HSP = Horsepower
LBS = Pounds
LCMA = Lobster Conservation Management Area
MA = Massachusetts
MAFMC = Mid-Atlantic Fisheries Management Council
ME = Maine
MIT = Massachusetts Institute of Technology
MSA = Magnuson-Stevens Act
N/A = Not Available
NEFMC = Northeast Fisheries Management Council
NEFS= Northeast Fishery Sector
NEFSC = Northeast Fisheries Science Center
NERO = Northeast Regional Office
NH = New Hampshire
NJ = New Jersey
NMFS = National Marine Fisheries Service
NY = New York
PIERS = Port Import/Export Reporting Service
RI = Rhode Island
RIDEM = Rhode Island Department of Environmental Management
RIDFW = Rhode Island Division of Fish & Wildlife
RIEDC = Rhode Island Economic Development Corporation
RILA = Rhode Island Lobstermen's Association
RIMFC = Rhode Island Marine Fisheries Council
SAFIS = Standard Atlantic Fisheries Information System
SSB = Social Sciences Branch
TBC= To Be Completed
TAC = Total Allowable Catch
URI = University of Rhode Island
US = United States
VSL = Vessel
VTR = Vessel Trip Report

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The profile introduction provides an overview of Rhode Island commercial fishing and seafood profile document. Why and how it was developed, the profile purpose, and the process by which the profile was produced. A summary of key study findings are reported.

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The purpose of Rhode Island Commercial Fishing Profile Chapter 1 is to summarize information about the present harvesting and processing components of the commercial fishing industry. The focus is on providing current baseline conditions for these sectors based on the best available data and information.

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The purpose of Rhode Island Commercial Fishing Profile Chapter 2 is to identify commercially important species that are targeted, the gear used, and fishing effort by Rhode Island fishermen. A summary of applicable harvest limits by species is provided along with a discussion of catch share sector programs – a new fisheries management initiative.

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Chapter 1
Harvesting and Processing Capacity

Defining Harvesting and Processing Capacity– Section 1.0

Harvesting capacity is typically measured in terms of inputs such as the number and sizes of vessels in the commercial fishing fleet with the combination of the engine power and hold capacity of a fishing vessel being more specific measure of harvesting capacity. Section 1.1 below characterizes the Rhode Island commercial fishing fleet using these input metrics. The National Marine Fisheries Service (NMFS) defines and measures harvesting capacity in terms of the potential harvest of a fishing vessel or fleet of vessels. Seafood processing capacity based on these descriptions is similarly defined. More importantly, factors of stock abundance, fishery regulations, and other constraints need to be considered to better understand harvesting and seafood processing. Unlike the state's fishing fleet, there is no statistical database describing the Rhode Island seafood processing sector nor is there a description of the potential seafood processing sector output.

A 2008 NMFS report entitled, "Excess Harvesting Capacity in U.S. Fisheries," measuring total fleet vessel capacity provides the following information. Commercial fishing vessel and seafood processing capacity broader conceptual descriptions are described below:

(1) For most fishery management purposes, the potential harvest of a fleet is more important than vessel physical characteristics; and
(2) Capacity is more typically a measure of potential outputs, and while potential output depends on physical characteristics of a vessel or plant, other factors are equally important. The following is the NMFS definition of harvesting capacity: Harvesting capacity is the maximum amount of fish that the fishing fleets could have reasonably expected to catch or land during the year under normal and realistic operating conditions of each vessel fully utilizing the machinery and equipment in place, and given the technology, the availability of skippers and crew, the abundance of the stocks of fish, some or all fishery regulations, and other applicable constraints.
(3) The U.S. Census Bureau's survey of plant (generic) capacity utilization, which is used to estimate capacity for most U.S. industries including primary seafood processors, defines capacity as "the maximum level of production that an establishment could reasonably be expected to attain under normal and realistic operating conditions fully utilizing the machinery and equipment in place." Harvesting and processing capacity based on these descriptions are similarly defined.

Seafood processing capacity is discussed in Section 1.3 under the context of the state's seafood processing description with information developed from available data and an industry survey that was conducted.

Based on this definition of harvesting capacity, a NMFS analysis entitled "Excess Harvesting Capacity in U.S. Fisheries," conducted on a total of 44 federally managed species in 2004 determined that excess harvesting capacity (the generic term means too much harvesting capacity) exists in varying levels in 20 U.S. fisheries, half of which were in the Northeast - N.E. multi-species, Atlantic herring, monkfish, Atlantic sea scallops, summer flounder, scup, black sea bass, Atlantic bluefish, mackerel, squid, butterfish, surf clam, ocean quahog, tilefish, and Atlantic deep sea red crabs. The study went on to say that, when excess harvesting capacity and overfishing occurs, there is often a concurring undesirable outcome and management problem. Other undesirable outcomes identified by the NMFS study include: high levels of by-catch, adverse impacts on habitat, substandard vessel safety, lower product quality, poor economic performance, less viable fishing communities, non-compliance with regulations, and a fishery management regime that is unnecessarily complex, unstable, burdensome, contentious, intrusive, and costly. Rhode Island's commercial fleet harvesting capacity and the level of excess harvesting capacity (as defined by NMFS) for those federal managed species

identified, and other state managed species as well, have not been analyzed and are not known. However, the presence of the negative outcomes described is certainly recognizable. The reader must keep in mind that other factors beyond RI fleet harvesting capacity influence individual vessel and fleet harvesting capacity and cause excess harvesting capacity. These factors include the broader impact of the total fleet harvesting capacity operating within a fishery, recreational fisheries catch, and the fact that some fisheries include many species while others are single-species fisheries. What has been identified is a general decline in the number of RI active commercial fishing vessels at both the state and federal levels, and a reported trend toward downsizing from larger to smaller vessels particularly in the trawl fleet reported by RIDEM staff managing the commercial piers at Galilee and Newport. They observed that larger vessels (70 ft. and larger) are being replaced by smaller vessels. This manifests itself based on the request for dockage at these facilities. There is not a qualitative or quantitative assessment of this vessel size distribution change available. It cannot be factually stated that the reported vessel downsizing is directly related to vessel harvesting capacity as much as other performance factors, but a reasonable assumption would include these as casual considerations worthy of monitoring.

Description of Rhode Island Commercial Fishing Fleet - Section 1.1

The information presented describes commercial fishing vessels that have federal or state fishing permits for 2010 or 2011. The fleet indices were developed from the NMFS Federal Vessel Permit and RI Vessel Declaration lists. The descriptive location qualifiers are for vessels that are either: RI home-ported, identify RI as their principle landing port, and/or whose owners have a RI address. Where possible, based on available information, active vessels, (those that recorded landings in 2010 within specific fisheries) are identified along with recent trend lines. These statistics show that the overall commercial fishing fleet numbers for active and non-active vessels are declining. This same two-way contraction extends categorically, although unevenly, across the fleet including inshore/offshore vessels, gear types, and within specific fisheries.

The average vessel ages describe an aging fleet for all categories, and new construction is virtually non-existent in recent years.

Distributions of vessel size changes (length, width, and draft) within the fleet are not tracked. However, according to RIDEM staff who manage Pt. Judith and Newport state commercial piers, downsizing has been occurring primarily within the trawl fleet for the last several years and the trend appears to be increasing (via personal communication with Robert Carpenter, Supervisor of Ports - Pt. Judith and Newport, RIDEM and Larry Mouradjian, RIDEM). There is not a quantitative monitoring of these fleet size distributional changes.

Analysis of Rhode Island Commercial Fishing Vessels by Length, Age and Landings

Below are three tables that show Rhode Island vessels (home-port vs. principle port) by fishing year, and characteristics length category and age.

If the argument is that RI's fishing fleet is getting "older" and "smaller," it really depends on what the definition of "smaller" is and over what time period any change is measured. Looking at RI homeport vessels and the change from 2009 to 2010, there is an increase in the overall number of active vessels of about 5%. Looking at the "smallest" of vessels (those <=30 feet) there was a 37% increase in activity (9 vessels). Just over half the vessels that are active in 2010 are less than 45 feet in length. From 2009 to 2010 there was an increase in activity from these vessels of about 9% (119 – 134 vessels). During the same period of time, the number of vessels considered "larger" (>45 feet) showed a decrease in activity by about -6% (83 – 78 vessels).

Vessel age is a bit harder to tack, as measuring the change in age is really a measure the age of vessels entering or exiting a population. One would expect that year-to-year the average age of vessels would increase by one, as each vessel gets one year older. Any change, more or less, than one would indicate vessels entering or

leaving the population. Overall the average age of vessels with a RI homeport stayed the same (26 years old) from 2009 to 2010, meaning that the average vessel was actually "newer." Looking at the "small" vessels (<45 feet), there was no change in average age (not even the expected 1 year increase), which would mean that the vessels "gained" between 2009 and 2010 were "newer" bringing the average age down. The "large" vessels (>45 feet) showed an increase in average age of two years meaning that the vessels "lost" between 2009 and 2010 were "newer" than the average "large" vessel, bringing down the average.

It is also important to consider the time range over which this change occurred. In the tables below and average of the years 2007, 2008 and 2009 is compared to 2010 as a way of looking at "recent trends." In terms of activity "small" vessels were more active (9% more, 122 – 134 vessels) in 2010 compared to the average of the previous three years. "Large" vessels were less active (-14%, 89 – 78 vessels) in 2010 compared to the average of the previous three years.

Although these are relatively large changes in activity within a group they represent a small change in the composition of where the landings are coming from. Between 2009 and 2010 "small" vessels increased the value of their landings by $1.5 million, or 2.1% of the total value of RI landings. During the same period "large" vessels also increased the value of their landings by about $1 million, but decreased their relative contribution buy 2.1%.

The argument that RI vessels are getting "older" and "smaller" is a relative one. There are now more active "small" vessels than "large" and that the "small" vessels are slightly "younger" than the "large" vessels but "small" vessels only catch a small percentage (12% - 14%) of the total RI catch.

Table 1.1: Makeup of the RI Home-Ported Fleet

Vessel size	% comp active in 2009	% comp active in 2010	Landings '09	Landings '10	% comp of landings in 2009	% comp of landings in 2010
<31	8.40%	12.70%	$290,720	$421,356	0.60%	0.90%
31 - 45	50.50%	50.50%	$4,991,823	$6,047,486	11.10%	12.90%
46 - 60	9.90%	8.50%	$3,768,170	$3,647,047	8.40%	7.80%
61 - 75	18.30%	17.00%	$17,202,362	$18,476,952	38.30%	39.40%
76 - 90	10.90%	9.40%	$12,015,768	$12,424,271	26.80%	26.50%
>90	2.00%	1.90%	$6,604,448	$5,874,054	14.70%	12.50%

Source: Matthew McPherson – NMFS/NEFSC
Comparative (comp) active % of vessel size (length) of annual total active fleet
Comparative (comp) landings % of total annual landings by vessel size

Table 1.2: Vessels Claiming RI as Home-Port State (source: Dealer [CFDETS20__AA] tables and Permit [VPS_Vessel])

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	Avg. '07, '08 & '09	2010	% change from '09 Avg.	% change from '07, '08 & '09 Avg.
RI Homeport													
#'s of active vessels	232	210	203	228	223	219	215	217	202	211	212	4.72%	0.31%
Avg. Built	1980	1980	1980	1981	1981	1982	1982	1982	1983	1983	1984	0.02%	0.05%
Avg. Age	21	22	23	23	24	24	25	26	26	25	26	2.66%	3.56%
Avg. Length	51	52	52	51	51	51	52	51	50	51	49	-3.85%	-4.85%
Avg. Gtons	52	54	54	54	54	54	56	53	52	54	47	-9.70%	-13.26%
Avg. Horse power	399	400	396	408	404	402	415	411	423	416	407	-3.95%	-2.32%
Sum landings	$42,376	$39,523	$44,696	$49,120	$53,397	$56,689	$48,738	$50,742	$44,873	$48,118	$46,891	4.30%	-2.62%
Size category break down													
#'s of active vessels													
<31	14	11	14	18	18	24	18	19	17	18	27	37.04%	33.33%
31 - 45	115	101	91	111	107	103	102	109	102	104	107	4.67%	2.49%
46 - 60	28	25	26	21	23	18	21	19	20	20	18	-11.11%	-11.11%
61 - 75	50	48	49	50	45	43	43	39	37	40	36	-2.78%	-10.19%
76 - 90	22	23	21	24	26	27	27	27	22	25	20	-10.00%	-26.67%
>90	3	2	2	4	4	4	4	4	4	4	4	0.00%	0.00%
Avg. Age													
<31	18	17	19	20	20	22	23	23	22	23	22	1.69%	-2.23%
31 - 45	19	19	20	21	21	21	23	24	24	23	25	2.73%	5.10%
46 - 60	28	30	31	33	35	32	30	32	28	30	32	12.84%	5.35%
61 - 75	23	23	24	26	26	27	27	28	29	28	31	3.68%	6.80%
76 - 90	19	21	22	22	23	24	25	26	26	25	26	0.19%	2.23%
>90	33	30	31	26	27	28	29	30	31	30	32	3.13%	6.25%
Sum landings (in $1,000's)													
<31	$141	$103	$83	$107	$271	$296	$502	$544	$291	$446	$421	31.00%	-5.81%
31 - 45	$6,096	$4,524	$3,486	$3,416	$4,819	$6,390	$6,106	$5,972	$4,992	$5,690	$6,047	17.46%	5.92%
46 - 60	$3,661	$3,723	$3,967	$3,012	$3,098	$3,323	$4,098	$3,758	$3,768	$3,875	$3,647	-3.32%	-6.24%
61 - 75	$15,457	$16,739	$19,503	$18,301	$19,299	$19,410	$16,792	$18,441	$17,202	$17,479	$18,477	6.90%	5.40%
76 - 90	$11,669	$11,070	$13,082	$16,058	$18,477	$19,725	$16,017	$15,359	$12,016	$14,464	$12,424	3.29%	-16.42%
>90	$5,352	$3,365	$4,576	$8,225	$7,431	$7,545	$5,223	$6,668	$6,604	$6,165	$5,874	-12.43%	-4.95%
Avg. per vessel landings (in $1,000's)													
<31	$10	$9	$6	$6	$15	$12	$28	$29	$17	$25	$16	-9.58%	-57.35%
31 - 45	$53	$45	$38	$31	$45	$62	$60	$55	$49	$55	$57	13.41%	3.52%
46 - 60	$131	$149	$153	$143	$135	$185	$195	$198	$188	$194	$203	7.01%	4.36%
61 - 75	$309	$349	$398	$366	$429	$451	$391	$473	$465	$443	$513	9.41%	13.73%
76 - 90	$530	$481	$623	$669	$711	$731	$593	$569	$546	$569	$621	12.08%	8.34%
>90	$1,784	$1,682	$2,288	$2,056	$1,858	$1,886	$1,306	$1,667	$1,651	$1,541	$1,469	-12.43%	-4.95%

Source: Matthew McPherson – NMFS/NEFSC

Table 1.3: Vessels Claiming RI as Primary Port State (source: Dealer [CFDETS20__AA] tables and Permit [VPS_Vessel])

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	Avg. '07, '08 & '09	2010	% change from '09 Avg.	% change from '07, '08 & '09 Avg.
RI Primary port													
#'s of active vessels	278	253	241	268	255	250	237	238	220	232	228	3.51%	-1.61%
Avg. Built	1973	1973	1972	1973	1973	1974	1974	1974	1984	1977	1984	0.03%	0.34%
Avg. Age	28	29	31	31	32	32	33	34	25	31	26	1.65%	-18.71%
Avg. Length	52	52	53	51	51	50	51	50	50	50	48	-2.93%	-4.14%
Avg. Gtons	54	56	57	53	54	53	55	52	50	52	47	-6.96%	-11.35%
Avg. Horse power	415	419	419	417	417	409	414	410	422	416	412	-2.55%	-0.92%
Sum landings	$57,083	$51,840	$56,981	$61,885	$65,448	$67,931	$56,201	$57,676	$51,850	$55,242	$54,047	4.07%	-2.21%
Size category break down													
#'s of active vessels													
<31	17	13	16	22	21	28	21	21	20	21	29	31.03%	28.74%
31 - 45	136	119	106	130	122	118	114	122	113	116	117	3.42%	0.57%
46 - 60	34	32	32	27	27	21	22	20	21	21	19	-10.53%	-10.53%
61 - 75	58	56	56	56	50	49	47	42	38	42	36	-5.56%	-17.59%
76 - 90	27	29	27	30	32	31	30	30	25	28	23	-8.70%	-23.19%
>90	6	4	4	3	3	3	3	3	3	3	4	25.00%	25.00%
Avg. Age													
<31	16	16	18	19	20	21	22	22	21	22	21	-2.00%	-5.13%
31 - 45	18	19	20	20	21	21	22	24	24	23	24	2.11%	4.61%
46 - 60	28	30	31	34	36	31	31	32	28	30	32	12.36%	5.43%
61 - 75	24	24	25	27	27	29	28	29	30	29	31	2.42%	5.82%
76 - 90	19	20	21	21	22	23	25	26	26	26	26	0.74%	3.36%
>90	25	24	25	27	28	29	30	31	32	31	31	-4.30%	-1.08%
Sum landings (in $1,000's)													
<31	$138	$115	$88	$115	$279	$301	$500	$559	$295	$451	$406	27.36%	-11.17%
31 - 45	$7,404	$5,671	$4,422	$4,071	$5,707	$7,617	$6,903	$6,985	$5,831	$6,573	$7,029	17.04%	6.49%
46 - 60	$4,726	$4,877	$5,080	$3,703	$3,721	$4,292	$4,527	$4,432	$4,248	$4,402	$4,003	-6.12%	-9.98%
61 - 75	$18,125	$19,162	$21,823	$20,132	$20,398	$20,943	$18,147	$19,393	$17,593	$18,378	$18,477	4.79%	0.54%
76 - 90	$14,952	$15,270	$17,336	$20,891	$23,151	$22,944	$19,071	$18,349	$14,455	$17,292	$14,985	3.54%	-15.39%
>90	$11,738	$6,745	$8,234	$12,974	$12,192	$11,835	$7,052	$7,959	$9,428	$8,146	$9,148	-3.07%	10.95%
Avg. per vessel landings (in $1,000's)													
<31	$8	$9	$5	$5	$13	$11	$24	$27	$15	$22	$14	-5.32%	-56.00%
31 - 45	$54	$48	$42	$31	$47	$65	$61	$57	$52	$57	$60	14.10%	5.95%
46 - 60	$139	$152	$159	$137	$138	$204	$206	$222	$202	$210	$211	3.99%	0.50%
61 - 75	$312	$342	$390	$359	$408	$427	$386	$462	$463	$434	$513	9.80%	15.42%
76 - 90	$554	$527	$642	$696	$723	$740	$636	$612	$578	$610	$652	11.25%	6.33%
>90	$1,956	$1,686	$2,058	$4,325	$4,064	$3,945	$2,351	$2,653	$3,143	$2,715	$2,287	-37.42%	-18.74%

Source: Matthew McPherson – NMFS/NEFSC

The commercial fishing fleet compositional changes noted call into question some obvious underlying impacts and concerns about overall fleet (vessel) and equipment condition.

Directly related issues involve vessel and equipment maintenance and service, fishing vessel safety and economic questions such as: Has vessel insurance coverage been affected? Is access to working capital an issue? More specifically, aging fleets and equipment would seemingly underscore the need for diligent maintenance and service to assure operational integrity, functional production capacity and fishing vessel safety. To answer these questions, CCE surveyed companies that provide these fleet services.

The companies contacted were Promet Marine Services Corporation (Providence), RI Engine (Pt. Judith), Pt. Judith Electronics (Pt. Judith), and Ocean Marine Insurance (Warwick). These multi-service entities are well recognized and established firms that provide related services to the RI fleet as well as to fishing vessels within the region. Collectively, their responses were that vessel services they provide have, for the last several years, been somewhat compromised. They report that vessel services, equipment services, and maintenance are done on an as-needed basis, opting for the (minimal) least costly action. For example, Promet reported that typical vessel bi-annual shipyard work (haul-out) is now conducted on 4-5 year or longer intervals often with only necessary and cosmetic work contracted. Similarly, engine, machinery, and electronic upgrades are postponed and service and maintenance completed only when absolutely needed.

Concerning fishing vessel safety issues that may be associated with fleet changes noted, suggest that higher awareness and emphasis on vessel and fishermen safety training is warranted. Following is a brief overview of safety regulations and safety training programs. Commercial fishing vessels over 36' operating outside of 12 miles are required to adhere to USCG safety regulations. The regulations include monthly safety drills and safety audits, as well as varying safety equipment requirements according to vessel class and size. According to Fred Mattera (Owner/President, North East Safety Training Co. (NESTCo)), about 60-70% of the Pt. Judith

fleet (captains and crews) have attended safety training programs and conduct monthly safety drills. The status of fishing vessel training beyond Pt. Judith is not known.

Commercial fishing marine insurance is not mandatory. Marine insurance coverage, such as liability protection and indemnity (P&I) and property insurance (hull), is required for vessels that are mandated to carry federal on-board observers. Additionally, vessels assigned to state managed pier slips (Newport and Pt. Judith) must provide Certificates of Insurance; proof of insurance is not required thereafter. The level of the total fleet insurance coverage is not known. Anecdotally, it has been suggested that smaller vessels (lobster boats and inshore draggers) have opted out of insurance coverage and are, in fact, self-insured (personally assuming all risk responsibilities). Some commercial fishermen believe that certain types of corporate ownership may limit liability exposure. Again, the level of total fleet corporate ownership forms is not known.

The socio-economic impacts associated with these changes in fleet composition and to the individuals affected are subject to speculation. What are displaced commercial fishermen doing? How have vessels been disposed of - sold or scrapped? What is the status and disposition of vessel permits? What has been the impact on the personal finances of involved commercial fishermen? Exit interviews or other efforts to collect this information could not be identified.

At the Department of Commerce public hearing on commercial ports' needs assessment conducted in June 2011 at Pt. Judith, access to working capital was noted as a problem by commercial fishermen. Part of that discussion reportedly included the creation of a revolving loan program to provide assistance to qualified commercial fishermen through the Rhode Island Economic Development Corporation (RIEDC). Sara-Beth Sidla of RIEDC and a Profile Steering Committee member, reported exploring this funding possibility within the RIEDC.

Size and Horsepower of Commercial Fishing Fleet

The RI state commercial fishing fleet decreased 12% from 2005 to 2011. In 2011 vessels ranged in length from 10 ft. to 113 ft. and horsepower from 3 hp to 1750 hp (source: RIDEM License Office, Margaret McGrath). In 2005 the size of the RI fleet was 10 ft. to 83 ft. and horsepower from 2 hp to 1640 hp. According to the RI Vessel Declaration list, there are 1,298 state-licensed commercial fishing vessels in 2011; for comparison, in 2005, there were 1,488 vessels. For a summary of the RI fleet, see Table 1.4.

According to the NMFS Federal Vessel Permit list for 2010, there are currently 359 federally permitted commercial fishing vessels home ported in Rhode Island, down from 367 in 2005. The vessels range in length from 8 ft. to 138 ft. and horsepower from 1 hp to 2775 hp with a total hold capacity of 12.4 million pounds. The average vessel age is 26 years, and the range is 1 to 66 years old (source: Kelley Mcgrath, NMFS).

In 2010, the RI commercial fishing fleet (federal and state) completed 58,840 fishing trips, landing 77.4 million pounds valued at $60.4 million. The top landed individual species by volume was Illex squid and the most valuable individual species was American lobster.

Table 1.4: RI Commercial Fishing Fleet Summary

	Federal Vessels 2010	State Vessels 2011
Count	**359**	**1,298**
Average Length	**43 ft**	**23 ft**
Average Horsepower	**375 hp**	**165 hp**
Hold Capacity	**12.4 million lbs**	**N/A**
Average Age	**26**	**N/A**

Source: Kelley Mcgrath (NMFS) - Federal Vessel Operator Permit List & Margaret McGrath (RIDEM) - RIDEM Vessel Declaration List

Fishing Vessel Age Sample

To provide a more focused view of vessel age, an analysis of the data supplied by vessels insured by Ocean Marine Insurance was completed. The vessel age construction analysis for this group of 94 insured (active) RI commercial fishing vessels revealed the following data. The mean vessel age for all vessel types is 24.8 years and the median age is 27 years. The mean age for the 39 listed draggers is 29.8 years and the median age is 31 years. The last new dragger construction occurred in 1990. The mean age of the 50 lobster vessels is 21.4 years and the median age is 25 years. Fifty-five of the 94 vessels (58.5%) were constructed between 1976 through 1986.

The Rhode Island Freezer Trawler Fleet Focus as described below has two purposes. The first intention is to profile this specialized fleet. Second, similar specific fleet descriptions are possible using the source databases noted and applied for analytical purposes that may be needed in the future. Please see the video link included which offers a unique view of these vessels that are a combination of fishing vessels and seafood processors.

Rhode Island Freezer Trawler Fleet Focus
(Fleet Description, Fishing Effort, Areas Fished and Landings)

Nine freezer trawlers are currently home-ported in Rhode Island, six in Pt. Judith and three in Davisville. The vessels range in length from 76' to 138' and horsepower from 600 hp to 2775 hp with hold capacity ranging from 150,000 lbs to 625,000 lbs. The average vessel age is 27 years and range is 24 to 31 years. The average age does not account for reconstruction that may have occurred. In 2010, the freezer trawler fleet completed 224 fishing trips. Trip length is dependent on filling the on-board frozen storage capacity and can run ten days or more depending on areas being fished and targeted species. These vessels may have ten or more crew and may rotate crews to maximize the fishing effort. The primary targeted species are Illex and Loligo squid, Atlantic mackerel, and herring. In 2010, the Rhode Island freezer trawler fleet total landings for all trips and species were worth $10.6 million and weighed 24.6 million pounds. The squid species accounted for about 70% of the freezer trawler landed value of all species. The freezer trawler landing value in 2010 equaled 15% of the total state landings adjusted for transient vessel landings (out of state landings by these vessels).
http://vimeo.com/27258920

Table 1.5 is a summary of active RI home-ported commercial fishing vessel fleet. Active vessels are vessels that reported landings in 2010.

Table 1.5: Active RI Home-Ported Commercial Fishing Vessel Fleet Summary 2010

	Active	Non-Active
Lobster Fishing Vessels	245	N/A
Freezer Trawl Vessels	9	N/A
Federally Permitted Squid Vessels	44	52
Federally Permitted Groundfish Sector Vessels	49	N/A
Federally Permitted Groundfish Vessels (common pool)	50	N/A
RI Fluke Sector Vessels	11	N/A
RIDEM State Commercial Vessels	1298	N/A

Source: Daniel Costa (RIDEM) – VTRs, Catch and Effort Logbooks & Dealer Reports (SAFIS), Tom Angell (RIDEM) Lobstermen Catch & Effort Logbooks, NMFS Federal Vessel Permit List, Andrew Kitts (NMFS/NEFSC) – Federal VTR database 2010

Commercial Fishing Landings and Trends Section 1.2

Commercial Fishing Landings

Commercial fishing is a primary production activity. From an economic perspective, commercial fishing is more like agriculture than recreational sport fishing, despite the fact that both involve catching fish. For commercial fishing, the initial contribution starts with the value of fish landed and sold by Rhode Island's commercial fishermen and the related employment for themselves and other commercial fishing-dependent commerce. The profile of commercial fishing activities provides a range of statistical and quantitative data. The estimate of commercial fishing harvest contributions to Rhode Island's economy is driven solely by the return received by commercial fishermen for 2010; revenues are defined and later described in this section as the value of landings. To provide current context to recent landing trends for the more important species, specific data and qualified cause and effect notations are presented.

2010 Rhode Island Commercial Fisheries Landing

Commercial fishery landings categories presented were developed from data provided by the National Marine Fisheries Service (NMFS) Fisheries Statistics Division. Rhode Island landings data is generated from mandatory dealer reports. All of the Rhode Island Seafood licensed dealers report bi-weekly to the Standard Atlantic Fisheries Informational System (SAFIS) on the pounds and dollar value (referred to as ex-vessel price) paid for species sold at each dealership. Data reported includes all landings, which occur at Rhode Island ports. Rhode Island vessels may, at times, land their catch at ports outside the state. The reasons may include proximity to areas being fished or market-based higher returns for specific species. Conversely, some Rhode Island landings may be from vessels based outside the state for similar reasons. The term "transient" is an often used description for these resulting landings which directly affect reported landings. There is a myriad of ways that landing data can be and presented. The presented data sets were selected because they encompass and summarize the most important fisheries landings factors.

In 2010, ex-vesssel landings at Rhode Island ports totaled 77.4 million pounds with a dockside value of $60.4 million (J. Barry, personal communication, April 18th, 2011). Of this total, finfish accounted for 42.8 million pounds (55% of total landings) valued at $23 million (38% of total value). Shellfish (quahogs, clams, scallops, oysters, mussels, crabs, whelks, and squid) accounted for 34.6 million pounds (45% of total landings) valued at $37.4 million (62% of total value). The average dockside value per pound of the 2010 Rhode Island landings overall was $0.78. Shellfish, at an average dockside value of $1.08 per pound, was 100% greater than the average value per pound of finfish ($0.54/lb.). The top ten species, accounted for 75% of the volume of the 2010 landings (see table 1.6) and 76 % of the value of landings (The list of the top ten species is different for pounds and value) (See table 1.7). The top five species, Northern shortfin squid (Illex), Atlantic herring, little skate, longfin inshore squid (Loligo), and Atlantic mackerel accounted for 52 % of the total landings. Northern shortfin squid (Illex), longfin inshore squid (Loligo), Atlantic mackerel, scup, silver hake, and American lobster species were among the top ten species by volume and value. Summer flounder, Northern quahog, goosefish, and sea scallops were among the top ten species by value, but not volume. Table 1.8 summarizes fisheries' landings in 2010 by selected categories. The categories represent high value species of selected gear/vessel types of inshore/offshore fisheries and are representative of the range of applications that are possible (Source: 2010 SAFIS Dealer Reported Landings).

Table 1.6: Top Ten Species by Volume (Pounds) 2010

Rank	Species	Volume	Percent of Total
1	Squid, Northern Shortfin (Illex)	12,431,611.00	16%
2	Herring, Atlantic	8,279,065.00	11%
3	Little, Skate	7,616,857.00	10%
4	Squid, Longfin Inshore (Loligo)	7,446,094.00	10%
5	Mackerel, Atlantic	4,355,810.00	6%
6	Scup	4,300,039.00	6%
7	Skates, Unclassified	3,428,067.00	4%
8	Hake, Silver	3,406,119.00	4%
9	Lobster, American	2,927,790.42	4%
10	Crab, Jonah	2,909,247.00	4%

Total Volume (Pounds) - 57,100,699.42 Total Percent - 75%

Source: Data provided by Daniel Costa ACCSP Coordinator, Division of Fish & Wildlife RI DEM-SAFIS Dealer Data

Table 1.7: Top Ten Species by Value (Dollars) 2010

Rank	Species	Value	Percent of Total
1	Lobster, American	12,394,242	21%
2	Squid, Longfin Inshore (Loligo)	7,512,831	12%
3	Flounder, Summer	5,560,038	9%
4	Squid, Northern Shortfin (Illex)	5,159,934	9%
5	Quahog, Northern	3,280,986	5%
6	Goosefish	2,980,052	5%
7	Scup	2,837,339	5%
8	Scallop, Sea	2,153,711	4%
9	Hake, Silver	1,954,207	3%
10	Mackerel, Atlantic	1,885,702	3%

Total Value (Dollars) – $45,719,042 Total Percent - 76%

Source: Data provided by Daniel Costa ACCSP Coordinator, Division of Fish & Wildlife RI DEM-SAFIS Dealer Data

Table 1.8: Categories or Specialized Categories of Fisheries Landings, Rhode Island 2010

Category	Volume (Pounds)	Value (Dollars)
*Lobster (Inshore) Area 2	1,035,983	$4,323,035
*Lobster (Offshore) Area 3 (Federal Reports)	2,222,182	$9,272,905
Freezer Trawl Fleet (All Trips/All Species) Landed in RI	23,583712	$9,173,073
Inshore Fishery (State Waters)	Needs to be developed	Needs to be developed
Groundfish	996,659	$1,260,902
RI Fluke Sector (All Trips/Species) Summer Flounder (Fluke)	4,637,131 128,162	TBA

* Information Provided by Tom Angell RI DEM Vessel Trip Report Catch & Effort Data
Dan Costa (RI DEM) – RI Fluke Sector, Andrew Kitts (NMFS/NESFC) – Federal VTR database

Transient Fleet Landings 2010

Rhode Island Landing from Out of State Vessels (Table 1.9)
Landings by Rhode Island State home-ported vessels in other states.

Table 1.9: RI Landings from Out of State Vessels 2010

Number of Vessels	Volume (lbs)	Value	Principal Species	Principal Ports
39	4,398,050	$3,927,706	Squid, Long Finned (Loligo), Summer Flounder, Surf Clams, Ocean Quahog, Sea Scallops	1.) Point Judith 2.) Davisville 3.) Newport

Data Source: (RIDEM Dan Costa & Kelley Mcgrath - NMFS/NERO Fishery Statistics Office Fishery Information Specialist

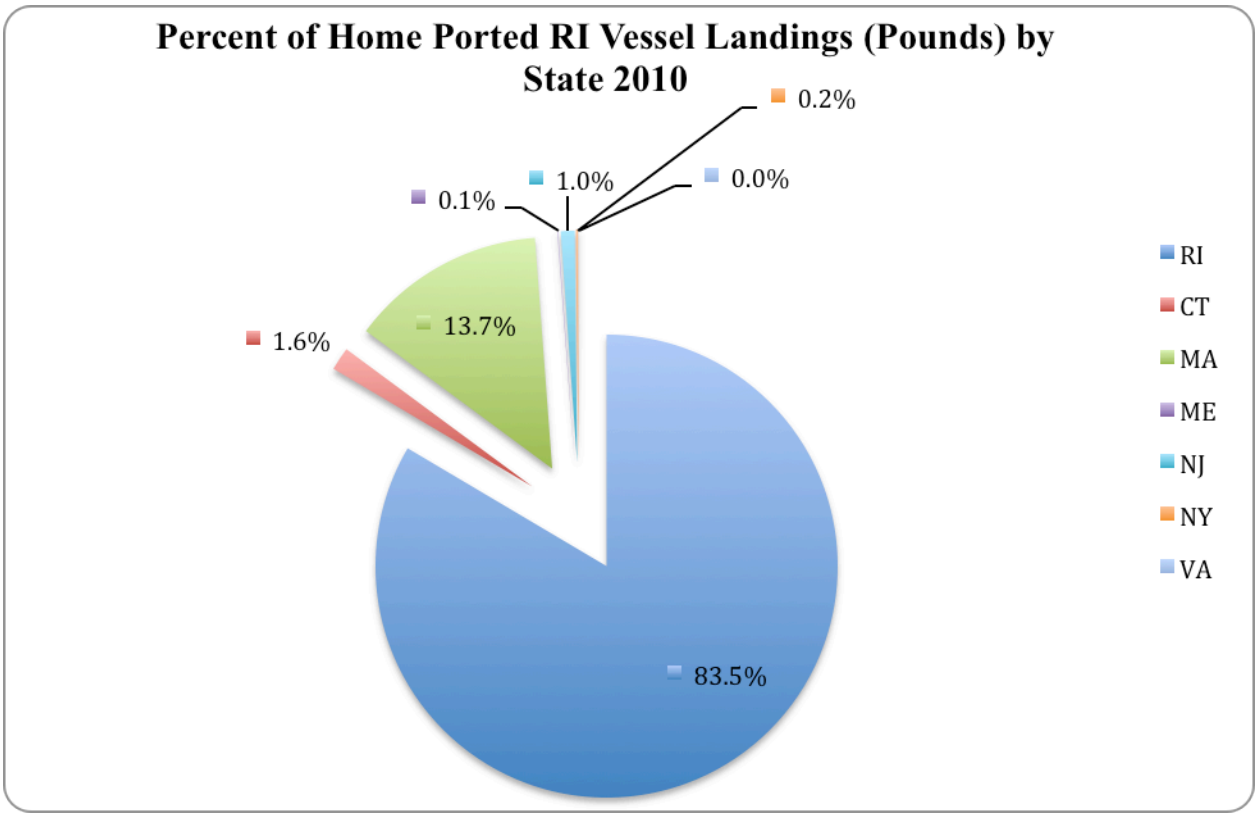
In 2010, RI State home-ported vessels landed 9,233,044 pounds and $9,385,262 of fish out of state. (See Table 1.10 Landings for RI State Home-ported Vessels by State 2010 and see Figure 1.1 for the percent of home- ported RI landings (pounds) by state 2010).

Table 1.10: Landings for RI State Home-ported Vessels by State 2010

State Landed	Sum of landings (lbs)	Sum of value ($)
RI	**46,724,548**	**36,860,399**
CT	**903,787**	**1,418,842**
MA	**7,660,633**	**6,619,816**
ME	**34,770**	**120,356**
NJ	**536,291**	**956,075**
NY	**88,686**	**254,900**
VA	**8,877**	**15,273**
Total	***55,957,592**	***46,245,661**

***Totals do not include some inshore species and RI landings by out of state vessels.** (Source: Andrew Kitts NMFS/NEFSC Social Sciences Branch – from Federal VTR Database)

Figure 1.1



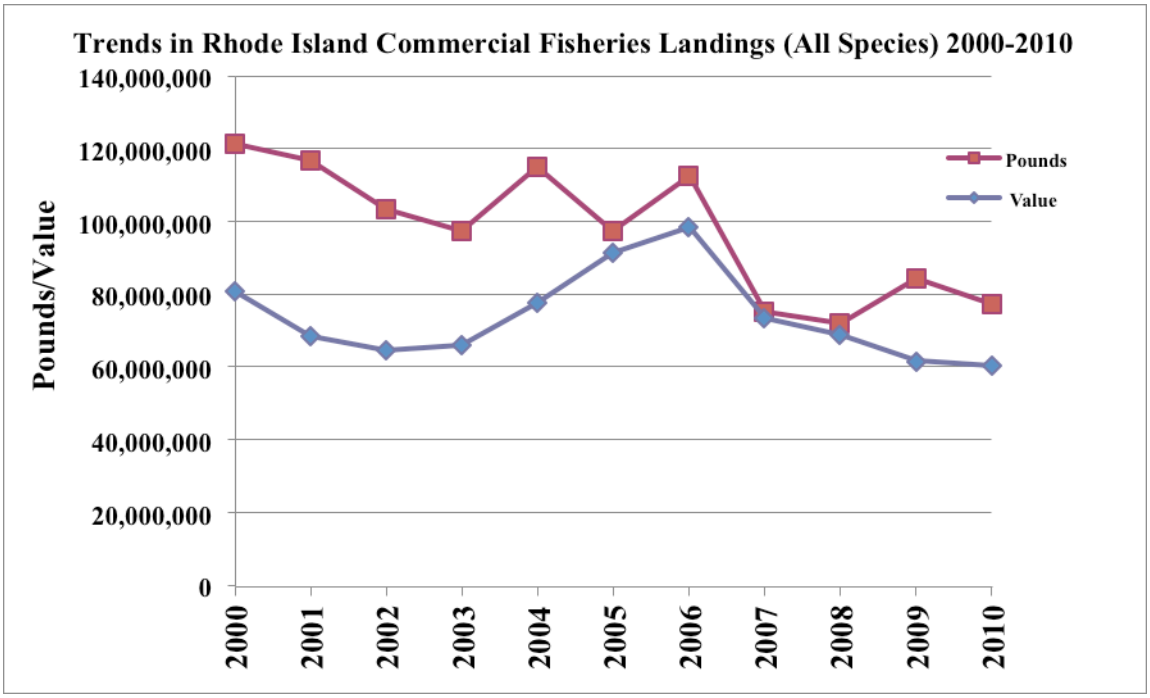
Source: Information provided by Kelley Mcgrath (NMFS) Dealer Data

Rhode Island Commercial Fishing Trends

In the figures and tables presented below, commercial fishing landings for recent years are compared in order to delineate the general changes in state landings and in the landing trends for selected species of high economic importance. Because the underlying data sources used can be sorted in numerous ways and are user friendly, profile users are encouraged to explore assembling the data in different ways. For example, averaging landing data by volume or value totals by subgroups is valuable in understanding landings in a collective long-term composite.

Beginning with a wider view of Rhode Island commercial fishing, Figure 1.2 depicts trends in total Rhode Island commercial fishing landings (for all species of finfish and shellfish) in value and volume for the time period of 2000-2010. The value trends are nominal values only and not adjusted for inflation and therefore are weighted toward the more recent years. For a broader prospective, the last year in which Rhode Island landings were below $60 million, (the 2010 value) was in 1982 ($56.7 million).

Figure 1.2



Value not adjusted for inflation

Economic clarity is gained when this 1982 value is adjusted for inflation using the "consumer board inflation index" translating to a 2010 value of $126 million. Total landings volume over the period 2000-2010 are decidedly uneven trending downward from 2006-2010 with landed value experiencing less fluctuation. Finfish and shellfish landings volume and landing value describe the relative year-to-year change and resulting trends by these major species sub-groups. The volume of landings for all species of finfish and shellfish in 2000 was 36% higher than 2010, while the unadjusted value of all species of finfish and shellfish in 2000 was 25% higher than 2010. When adjusted for inflation, the 2000 value in 2010 dollars is $101,474,041 and is 60% greater than 2010. The proportion of shellfish to finfish landings between the two periods was dynamic with finfish decreasing 39.2 million pounds, which was 51% of the 2010 total landings. Shellfish decreased from 39.3 million pounds landed in 2000 to 34.5 million pounds in 2010. The overall value of shellfish landings declined relative to finfish with shellfish accounting for 67% of landings revenue in 2000 and 62% in 2010. There were similar fluctuations and changes in commercial fish landings (pounds) by species during the 2000-2010 period. In terms of species composition, commercial landings underwent substantial changes during the 2000-2010 period. The reasons for these changes come from an array of causal factors, including fishery management regulations, changes in biological stocks, market, economic and environmental conditions.

Table 1.11 lists the top ten species by pounds landed in 2000. Like the top ten species by pounds landed in 2010 (See table 1.6) they accounted for more than 82% percent of total landings. There are differences in the species on the list for these two years (and the intervening years). Five species are common to both lists: Atlantic herring, Loligo squid, Illex squid, silver hake, and American lobster. Of the top ten species by pounds landed in 2000 - goosefish, winter flounder, yellowtail flounder, summer flounder, and quahog clam - are not on the top ten species by pounds landed in 2010. In 2010, little skate, Atlantic mackerel, scup, skates (unclassified), Jonah crab were on the top ten species list and not on the 2000 top ten species list.

Table 1.11: Top Ten Species by Volume (Pounds) 2000

Rank	Species	Volume	Percent of Total Landings
1	Herring, Atlantic	40,412,999	33%
2	Squid, Longfin Inshore (Loligo)	15,326,032	13%
3	Squids (unclassified)	10,724,684	9%
4	Hake, Silver	10,507,739	9%
5	Lobster, American	6,907,504	6%
6	Goosefish	5,897,436	5%
7	Flounder, Winter	1,792,498	2%
8	Flounder, Yellowtail	1,762,946	2%
9	Flounder, Summer	1,703,593	2%
10	Clam, Quahog	1,409,113	1%

Total Volume (Pounds) – 96,444,544 Total Percent - 82%

Table 1.12 shows the top ten species by value landed in 2000. These species accounted for 86% of total landed value in 2000, compared to 76 % for the top ten species landed by value in 2010 (see Table 1.7). Seven of the species are common to both lists; lobster and squid (unclassified) are ranked one and two on both lists. Atlantic herring, yellowtail flounder, and winter flounder are on the top ten species by value of landings in 2000 but not 2010. Similarly, scup, sea scallop, and Atlantic Mackerel which are among the top ten landed by value in 2010 and are not on the 2000 list.

Table 1.12: Top Ten Species by Value (Dollars) 2000

Rank	Species	Value	Percent of Total Value
1	Lobster, American	28,103,381.00*	35%
2	Squid, Longfin Inshore (Loligo)	10,762,869.00	13%
3	Clam, Quahog	7,990,838.00	10%
4	Goosefish	6,892,471.00	9%
5	Flounder, Summer	3,800,377.00	5%
6	Hake, Silver	3,639,538.00	4%
7	Herring, Atlantic	2,336,530.00	3%
8	Squids (unclassified)	2,173,646.00	3%
9	Flounder, Yellowtail	1,760,033.00	2%
10	Flounder, Winter	1,756,369.00	2%

Total Value (Dollars) – $69,216,052 Total Percent - 86%

***Does not include over the dock cash sales**

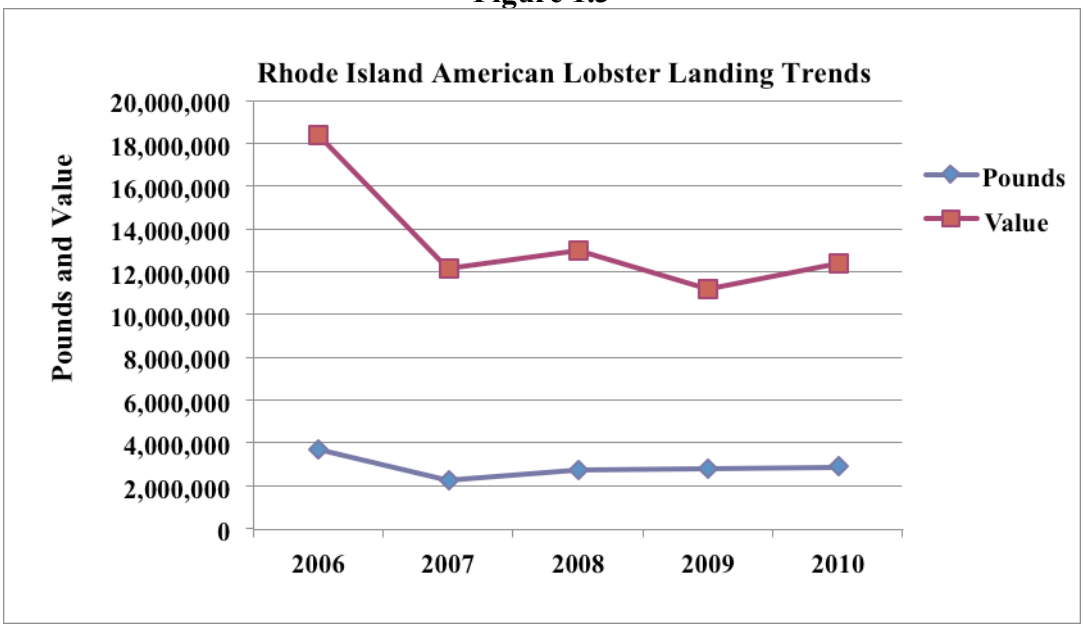
A more chronological view of pounds landed of important species - lobsters, Loligo squid, groundfish and Northern quahog for 2000-2010 is presented in Table 1.13.

Table 1.13: Landings in pounds of Important Species

Year	Lobster	Loligo Squid	Groundfish	Northern Quahog
2000	6,908,000	15,326,032	5,003,348	860,000
2001	4,452,000	15,474,861	3,928,083	1,409,000
2002	3,835,000	18,136,451	3,977,496	1,220,000
2003	3,475,000	15,699,474	3,616,472	1,192,000
2004	3,064,000	21,030,993	3,363,046	1,131,000
2005	4,344,000	22,135,348	1,883,130	1,080,000
2006	3,749,000	21,293,922	2,324,056	642,000
2007	2,294,000	15,872,656	2,951,547	679,000
2008	2,772,000	14,661,286	1,601,122	615,000
2009	2,832,000	11,141,933	1,579,700	567,000
2010	2,927,790	7,446,094	1,047,176	610,169

Lobster was among the top ten species in value and volume in 2006 to 2010, underscoring its importance within Rhode Island's commercial fishery. Trends in the value and volume of lobster landings for 2006-2010 are presented below: (Fig. 1.3)

Figure 1.3



Factors affecting lobster landings trends include biological stock levels and fishing effort regulations (Pot and permit limits).

To underscore the Lobster fishery importance in Rhode Island fisheries, the Lobster Fishery Focus, which follows, describes landings, fishing effort and numbers of licensees. Management responsibilities and challenges are outlined to help assess current fishery conditions.

Lobster Fishery Focus

American Lobster is the most important species in landed value for the state of RI. In 2000 the American lobster landed value was $28.1 million the highest landed individual species in RI. The landed value of American Lobster in 2010 was $12.4 million (SAFIS dealer data) and today is still the highest value landed individual species. This data does not include direct to consumer lobster sales (dockside sales). The RI dockside sales in 2010 for American lobster were 162,616.47 lbs worth $845,514.90 (RIDEM personal communication, September 12, 2011). In 2010, there were a total of 948 RI State commercial fishing licenses issued with the ability to catch and land American lobster in RI. Of these 948 licenses, 358 had a lobster trap allocation associated with them. In 2007 these licenses were respectively 1,050 and 370 (RIDEM, 2011a). There were 248 lobster trap fishermen with lobster trap allocation that reported landing lobster in 2010. In 2010, there were a total of 10,316 fishing trips made that reported landing lobster, consisting of 9,530 lobster trap and 786 non lobster trap fishing trips. Lobster trap fishermen reported fishing a total of 116,613 lobster traps, according to the Vessel Trips Reports and RI Commercial Harvester Catch & Effort Logbooks submitted by the lobstermen. According to the 2010 RIDEM lobster trap tag order data there were 245 lobster trap fishing vessels home-ported within the state. (T.Angell personal communication, September 12, 2010).
The Rhode Island Department of Environmental Management (RIDEM) manages lobsters within state waters with guidance from the Rhode Island Marine Fisheries Council and Rhode Island Division of Fish and Wildlife (RIDFW). Regional management of the lobster resource is the responsibility of the ASMFC. Amendment 3 to the fishery management plan (ASMFC, 1997) and associated addenda govern the interstate management program. Peer reviewed coast wide stock assessments (ASMFC, 2000, 2006, 2009) provide information on lobster biology and resource status. In response to the American Lobster Technical Committee (ALTC) report on recruitment failure in Southern New England (SNE), the ASMFC Lobster Management Board called for development of an addendum to address a recommended 10% reduction in the exploitation rate on lobster in the SNE stock, (ASMFC, 2011).

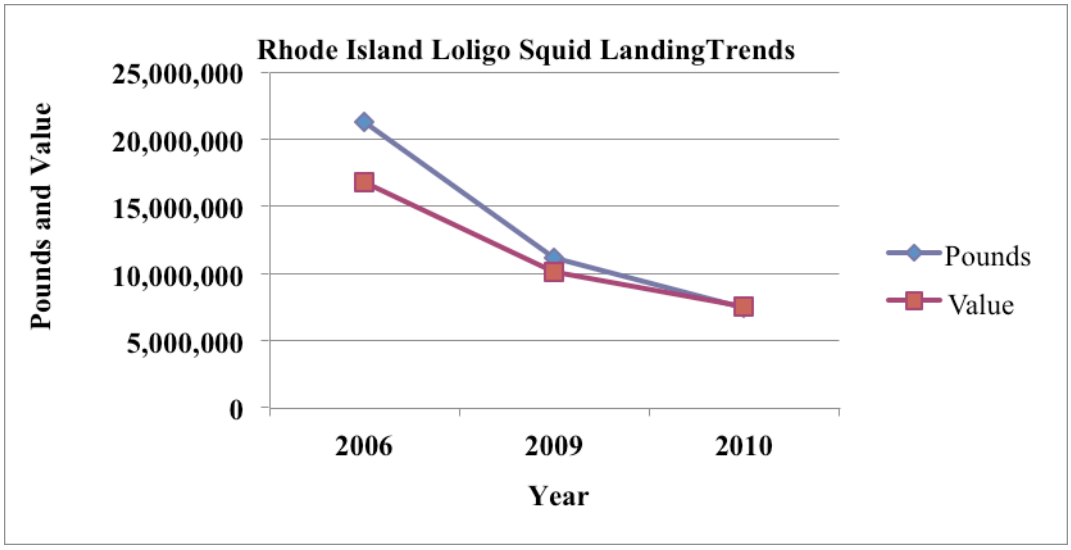
Table 1.14: RI Lobster Fishery Catch & Effort 2010

Area	Total Number of Lobstermen Fishing Lobster Traps	Total Number of Lobstermen Fishing Non-Lobster Traps (other)	Total Number Trap Tags Issued	Total Number Traps Fished	Total Number of Fishing Trips	Total Lobster Landings (Volume)	Total Lobster Landings (Value)
LCMA 2	219	64	113,678	79,639	9,262	930,935	$4,323,035
LCMA 3	29	25	39,035	36,974	1,051	1,996,855	$9,272,905
LCMA 4		2			3		
Total	248	91	152,713	116,613	10,316	2,927,790	$13,595,940

Information provided by Thomas E. Angell RIDEM / Fish and Wildlife / Marine Fisheries – Lobster Catch & Effort Data

Rhode Island landings of Loligo squid accounted for fifty-four percent (54%) of all Northeast Loligo landings in pounds in 2010, with 197 (number) of active federally permitted RI vessels landing Loligo squid. Trends in value and volume of Rhode Island Loligo squid landings for 2006-2010 are presented below: (Figure 1.4)

Figure 1.4



Factors affecting Loligo squid landings include biological stocks along with small mesh bycatch issues involving winter flounder and butterfish.

The importance of the Rhode Island Loligo squid fishery to the small mesh trawl fleet and seafood processing sector is significant. This dependency has evolved over several decades, the results of which are described in the Loligo Squid Fishey Focus. The fishery is not without challenges that will need to be addressed.

Loligo Squid Fishery Focus

Loligo Squid has been the second most important species in landed value for several years, maintaining that position in 2010 (see Fishery Landings).

Beyond Loligo landings within the state, Loligo are landed by Rhode Island vessels in other states and substantial amounts of Loligo landed by non-RI vessels are shipped into Rhode Island seafood processors. Collectively, the economic contributions associated with the Loligo fishery are particularly important to the state's commercial fishing economy and dependent communities. In 2010, fifty-four percent (54%) of the northeast Loligo fishery was landed in Rhode Island (see figure 1) and Pt. Judith Loligo landings accounted for forty-five percent of all landings (see figure 2). Forty-four of the fifty-two RI home-ported Loligo federally permitted vessels reported squid landings in 2010 (see figure 3). The fishery is dominated by small mesh otter trawlers, but near shore fixed gear pound net fishing trips also occur during the spring and summer. As reported elsewhere, Loligo landings value and volume have been trending downward in recent years. While the nominal ex-vessel prices of Loligo have risen, the ex-vessel inflation adjusted prices since 1997 (when mandatory reporting for Loligo was instituted) have been relatively flat (MAFMC staff, personal communication, April 15, 2011).

In 2010, NMFS implemented management measures in Amendment 10 to the Atlantic Mackerel, Squid, and Butterfish (MSB) Fishery Management Plan (FMP) (MAFMC, 2009) to bring the FMP into compliance with Magnuson-Stevens Fishery Conservation and Management Act requirements by establishing a butterfish rebuilding program that; allows the butterfish stock to rebuild; protects the long-term health and stability of the butterfish stock; and minimizes butterfish bycatch and the fishing mortality of unavoidable bycatch, to the extent practicable, in the MSB fisheries. Amendment 10 implemented the following measures: increased the minimum codend mesh size requirement for the Loligo fishery; established a butterfish rebuilding program with a butterfish mortality cap for the Loligo fishery; established a 72 hour trip notification requirement for the Loligo fishery; required an annual assessment of the butterfish rebuilding program by the Council's Scientific and Statistical Committee (SSC). The butterfish mortality cap is intended to limit butterfish catch (landings and discards) on trips that land greater than or equal to 2,500 pounds of Loligo. The cap is equal to 75% of the butterfish acceptable biological catch (ABC) (MAFMC, 2009). The implementation of the butterfish bycatch cap in 2011or thereafter can have significant impacts on the viability of the Loligo fishery. Closure of this fishery as a result of reaching the butterfish bycatch cap will be crippling to the state's small mesh trawl fishing industry and processing facilities. The Loligo squid fishery is of vital importance to the economic health of RI commercial fishing communities. Loligo landings in 2010 were valued at $10 million in RI.

State	Landings_ mt	Pct_of_Total
Rhode Island	5,054	54%
New York	1,859	20%
New Jersey	1,565	17%
Massachusetts	585	6%
Connecticut	166	2%
Virginia	63	1%
Other	14	0%
Total	9,306	100%

Figure 1. Loligo Landings (mt) by State in 2010 (NEFSC, 2010)

Port	State	Landings mt	Pct of Total
POINT JUDITH	RHODE ISLAND	4,191	45%
CAPE MAY	NEW JERSEY	1,387	15%
MONTAUK	NEW YORK	1,155	12%
NORTH KINGSTOWN	RHODE ISLAND	734	8%
HAMPTON BAYS	NEW YORK	582	6%
OTHER BARNSTABLE	MASSACHUSETTS	250	3%
NEW BEDFORD	MASSACHUSETTS	221	2%
NEWPORT	RHODE ISLAND	117	1%
POINT PLEASANT	NEW JERSEY	107	1%
BELFORD	NEW JERSEY	70	1%
STONINGTON	CONNECTICUT	63	1%
OTHER CONNECTICUT	CONNECTICUT	50	1%
POINT LOOKOUT	NEW YORK	45	0%
HARWICHPORT	MASSACHUSETTS	33	0%
Others	NA	300	3%
Total	NA	9,306	100%

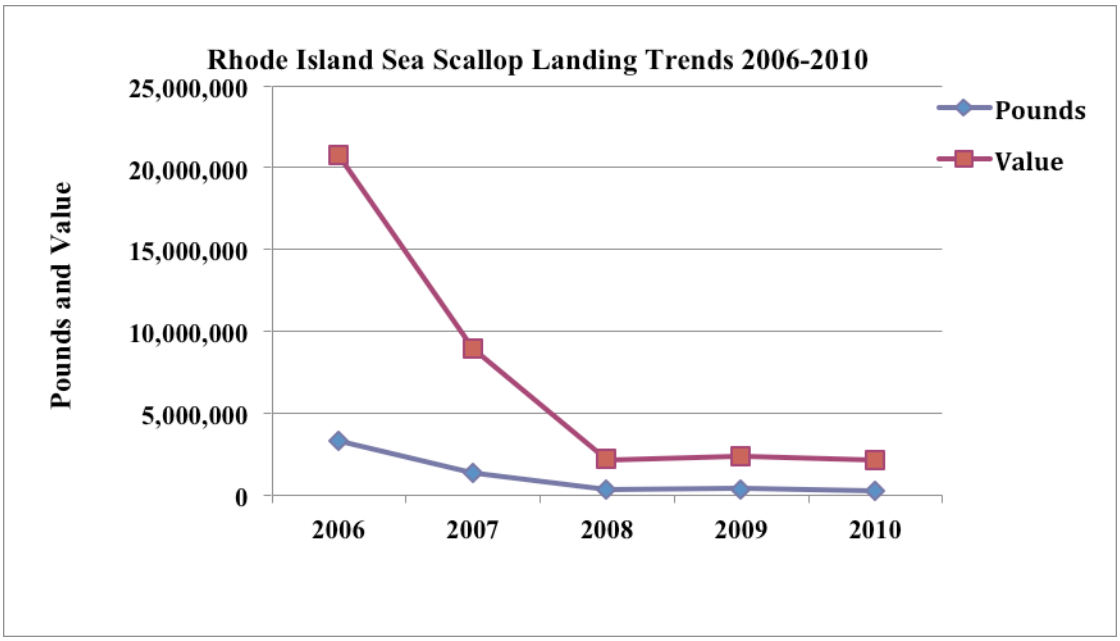
Figure 2. Loligo Landings by Port 2010 (NEFSC, 2010)

HPST	Permitted Vessels	Active Vessels
MA	103	25
NJ	83	45
NY	56	42
RI	52	44
NC	22	13
ME	20	0
VA	13	1
CT	8	6
PA	3	1
MD	2	2
NH	2	0
WV	1	1
Total	365	180

Figure 3. Loligo-butterfish permits by State 2010

Sea Scallop value and volume of landings for 2006-2010 reflect the individual species that has had the most direct impact to overall Rhode Island landings value during the period. The landed value of sea scallops precipitously dropped from $20.2 million in 2006 to $2.2 million in 2010 (unadjusted dollars) (See Figure 1.5 below).

Figure 1.5



The factors affecting the dramatic decline in landings volume and value of sea scallops are directly tied to the management allocation of the sea scallop resource. Concurrently, the economic contribution of the valuable sea scallop fishery has virtually reversed and improved the fortunes of the ports of New Bedford, Massachusetts and Cape May, New Jersey as well as other ports in these states. The landing data for the Rhode Island sea scallop fishery for both volume and value in 2010 were less than 2006, with volume experiencing a sharper decline than value. The peak in volume occurred in 2006 (3.3 million pounds) and landing value was highest in 2006 ($20.8 million).

Value and volume trends for important species for the 2006-2010 time period display differing fluctuations but share a common downward trajectory. Profile users are encouraged to access the data sources for other species of interest.

Landing Trends – Average Annual Price per Pound

The average annual price per pound paid for landed fish is an important indicator of market conditions (supply and demand), regulatory effects and the socioeconomic impacts on fishermen and communities dependent on commercial fishery generated revenue. Average annual price trends for total landings of finfish and shellfish 2006-2010 are shown in Table 1.15, with the average annual price trends for selected species shown in Table 1.16.

Table 1.15: **Average Annual Price for Finfish and Shellfish 2006-2010 (Dollars)**

Species Groups	2006	2007	2008	2009	2010
Total Landings	0.87	0.98	0.96	0.73	0.78
Finfish	0.46	0.61	0.67	0.51	0.54
Shellfish (including squid)	1.35	1.41	1.22	1.00	1.08

Source: NOAA Fisheries: Office of Science and Technology – Fisheries of the United States 2010

Table 1.16: Average Annual Price Trends for Selected Species 2006-2010
Average Price per Pound by Year (unadjusted for inflation)

Species	Year				
	2006	**2007**	**2008**	**2009**	**2010**
American Lobster	4.91	5.3	4.69	3.96	4.23
Northern Quahog	5.13	8.27	10.33	5.60	5.38
Loligo Squid	TBA	TBA	TBA	TBA	1.01
Atlantic Mackerel	0.32	0.28	confidential	0.36	0.43
Scup	0.76	0.71	1.09	0.74	0.66
Summer Flounder	2.38	2.91	3.12	2.53	2.43

The average prices shown above are unadjusted for inflation. There is evidence of general price stagnation, and particularly for species such as scup, squid, and whiting which are important to Rhode Island's small mesh trawl fisheries. A broader negative price impact is from the growing import market, which now dominates U.S. seafood consumption. This import portion claimed 84% of the market in 2009 up from 68% in 2000, according to NMFS Fisheries of the United States 2009.

The most direct impact involves substitution of cheaper imports for higher priced local catch. In 2010, Rhode Island lobstermen along with their counterparts from surrounding New England States were successful in filing a petition under the USDA Trade Adjustment Assistance Program for relief from foreign importation of lobsters. Evidence was provided to support the claim that prices and production of lobsters in Rhode Island were marginally affected by foreign imports in 2009. A total of 128 Rhode Island commercial lobster fishermen have qualified for program benefits according to the Rhode Island Sea Grant Program. More directed research about price trends and impacts is needed to both quantify and validate current price structure issues. Simply comparing average prices, even adjusting for inflation does not account for changes in quantity of supply, economic conditions and competing supply sources. Different approaches, such as price indexing - i.e. tying price changes to other factors like changes in supply, could be considered. This work if pursued should also focus on possible remedies. One approach to expanding and increasing prices received by commercial fishermen that are gaining interest and traction regionally and within Rhode Island is a Community Supported Fisheries (CSF) approach to localized marketing of Rhode Island commercial and seafood harvest. Tailored after the better known community supported agriculture programs both nationally and in Rhode Island, the program is premised on the belief that there is an inherent value and benefit in the consumption of locally grown (and caught in case of seafood) and sourced foods.

Seafood Processing Profile - Section 1.3

The seafood processing industry in Rhode Island is characterized by a relatively small number of establishments that exclusively or primarily process seafood and many more that process seafood as one of a number of related activities. In the latter case, these establishments may be primarily engaged in wholesale, retail, harvesting (i.e. Freezer Trawlers), or other activities. As a result, U.S. census and other standard data sources including NMFS, do not characterize these establishments as seafood processors. The omission of seafood processing that may be occurring but not accounted for posed certain difficulties in developing a fact based profile of the Rhode Island seafood processing industry, requiring the need to develop new sources of information by the Project Research Team.

The first step was to establish a useful definition of seafood processing. NMFS describes processing as, "the preparation or packaging of fish to render it suitable for human consumption, retail sale, industrial uses, or long-term storage, including but not limited to cooking, canning, smoking, salting, drying, filleting, freezing or rendering into meal or oil; and seafood processing capacity as (1) the ability to sustain, harvest, hold or process and (2) the maximum amount that can be produced per unit of time with existing plant and equipment, provided the availability or variable factors of production is not restricted." Clearly, seafood processing as defined here would cast a much wider circle of inclusion beyond the primary processor types mentioned above.

Four existing NMFS reports/ databases were found that identified or referenced Rhode Island seafood processing. Table 1.17 was created to summarize these NMFS report-generated RI seafood processing data. Information includes number of establishments, employment levels, income totals, sales, and volume and product information.

Table 1.17: Summary of NMFS Generated Reports that include Rhode Island Seafood Processing Data

NMFS Document Name, Data Year, Contact	Number of Establishments	Sales Volume	Number of Employees/ Income	Primary Data Inputs	Total Production (LBS)/ Important Species
Trends in Selected NE region Marine Industry (2009) 2008 Data - Contact: Eric Thunberg NOAA Technical Memo NMFS-NE-211	8	N/A	270	County Business Patterns - US Census Data Employment Data Bureau of Statistics	N/A
Fisheries Economics of the United States 2009 Data - Contact: Rita Curtis – NOAA Fisheries, Office of Science and Technology	N/A	$41.2 million	393 $1.6 million	RI Fishery Landings 2009-SAFIS Data - Seafood Imports and Per capita Consumption Factor	N/A
The Economic Contributions of seafood Landed (Econometric Model) 2010 Data - Contact Scott Steinback NEFSC-SSB	N/A	$16.1 million	214 $ 5.9 million	Fishery Landings RI 2010 SAFIS Data	N/A
NMFS Annual Seafood Processor Survey 2009 - Contact Alan Lowther/Melissa Yencho - NOAA Fisheries, Office of Science and Technology	10	$51.7 million	350	Annual Survey	72.2 million pounds

A review of table 1.17, underscores the comparative disparity in the reported information on Rhode Island seafood processing. This is mainly attributable to the variability in the data sets, varying data years and limited data input sources. The result is an incomplete and extremely under valued estimate of the Rhode Island seafood processing sector. This outcome is not intentional and the documents presented make no claim extending beyond the data source inputs i.e. RI fishery landings, survey respondents, etc.

When considering the activities that describe seafood processing and the substantial number of seafood entities that conduct some seafood processing, it became obvious that an industry survey would help develop the needed information. It was determined that the best starting place is with the state dealer permit database (SAFIS). The first step was to review the current dealer license list by species and value for 2010. From the list, the top 25 dealers, which represent about 85% of dealer purchases of finfish or finfish and shellfish, were selected to survey. The survey population was based on the assumption of a higher likelihood of processing activity and the reality of available time. Through consultation with industry and NMFS staff, known processors not on the dealer list were identified and questioned. The contributions of the Freezer Trawler fleet were also considered. At best, this estimate of seafood processing was limited to the information collected from those contacted and willing to supply information and does not fully characterize seafood processing activity. The survey focused on four key areas: interstate shipment of fish into RI for processing and distribution; processing capacity and impediments; modes of transportation and marketing; and estimates of employment, sales volume and related factors. The survey questionnaire and detailed response summary is included in Appendix (E) to this report. Eighteen (18) of 28 contacted firms responded. A summary of the findings is as follows:

-Respondents estimated that 44 million pounds of fish, shellfish and squid valued at $30 million were sourced from outside RI for processing and distribution in 2010.
- 60% (11) of respondents said their facility processing capacity was underutilized. The most notable impediment identified was raw product supply. The study team observed and was able to later verify through industry consultation that one supply solution gaining traction with the larger processors was the use of vertical integration incorporating harvesting components through:

a.) direct vessel ownership;
b.) forward contracting with commercial fishing vessel operators (establish contractual agreement to land product on predetermined conditions;)
c.) joint ventures with commercial fishing vessel operators to share profits based on market conditions; and
d.) partnership: including financial investments providing operating working capital for economically distressed fishing vessels (which are estimated to be representing a significant segment of harvesting sector). Additionally, some firms are using company operated/contracted trucks for direct pick up of fish from ports outside of RI.

-Transportation modes varied according to individual needs of respondents and included dependence on common carriers. Some, 17 of 18 respondents have delivery trucks and use delivery services along with company operated refrigerated tractor-trailers and straight body trucks and vans. Marketing methods most mentioned were print ads, in- house sales teams, website sand seafood trade shows. When asked about a generic marketing program promoting Rhode Island seafood, 72% (13) welcomed the idea and about half were willing to financially support the concept.
-The estimates of employment for those surveyed and responding was 424 fulltime and 117 part-time employees. Total sales volume was 154 million pounds valued at $144 million from those surveyed.

WASTE WATER TREATMENT

Company operated wastewater pre-treatment systems are required by primary seafood processors in Pt. Judith and Davisville. The local public wastewater treatment facilities cannot process untreated wastewater from these processors because of the biological oxygen demand (BOD) levels, not because of wastewater volume.

Upgrades in these public waste treatment facilities would be needed to directly accept seafood processing wastewater at these sites.

While the survey was able to collect information not readily available elsewhere it does not claim to capture the total RI seafood processing activity, and while the estimates provided are unaudited, they do substantiate qualitatively that a significantly large seafood processing sector exists in Rhode Island. Based on these estimates of out of state raw product inputs and overall sales volume, it is possible at this point to say that Rhode Island seafood processing is not well quantified by traditional models used for these estimates. The distribution of Rhode Island seafood dealers and processors by port/town are contained in Chapter 4 in Section 4.2, Table 4.2 Rhode Island Commercial Fishing Industry Infrastructure.

More information on the volume and value of RI seafood processing, the number of establishments and type of processing they employ, total sales, payroll and employment records, source of fish and shellfish processed, and production capacity is needed to accurately characterize and profile the RI seafood processing sector.

Section Endnotes: Section 1.4

- Estimate of value of landings by RI vessels in other states $10 million.
- Estimate of value of landings in RI by out of state vessels if $4 million.
- 2010 -Major species landed in terms of volume: squid – Illex squid, Atlantic herring, Little Skate, Loligo squid, Atlantic mackerel, scup, skates (unclassified), silver hake, American lobster, Jonah crab
- 2010 - Major species landed in terms of value: American lobster, Loligo squid, summer flounder, Illex squid, northern quahog, goosefish (monkfish), scup, sea scallop, silver hake, Atlantic mackerel
- The top ten species accounted for 75% of the volume and 76% of the value of landings
- 2010 – Loligo squid landings in RI comprised 54% of all total Loligo squid landings in the northeast, and RI processors account for a majority of the domestically harvested squid products processed in the Northeast.
- 2010 – major species processed in Rhode Island include: Loligo squid, Illex squid, Atlantic mackerel, and Atlantic herring
- American lobster is the highest value landed species ($12.4 million in 2010 according to SAFIS dealer data – dockside sales was worth another approximately $845,500.)
- 2011 – Number of state licensed commercial fishing vessels was 1,298 (down from 1,488 in 2005). These vessels ranged in size from 10’ to 113’ and horsepower of 3hp to 1750 hp.
- 2010 – Number of federally permitted vessels is 359 (down from 367 in 2005). These vessels range in size from 8’ to 138’ and from 1 hp to 2775hp.
- Average vessel age is 26 years. The last new dragger construction occurred in 1990.
- Nine freezer trawlers are currently home ported in RI (6 in Pt. Judith and 3 in Davisville). These vessels target squid, Atlantic mackerel, and herring.
- 2010 – There were 248 lobster trap fishermen with lobster trap allocation that reported landing lobster, and RI DEM lobster trap tag order data indicated there were 245 lobster trap fishing vessels home ported within the state.
- Rhode Island seafood processing has been found to be underestimated in federal reports.

- Study surveyed the top 25 dealers representing 85% of dealer purchases, with 18 responding. Survey results for the 18 respondents indicated total sales of 154 million pounds of fish and squid valued at $144 million for this group.
- Survey results also estimated at total of 44 million pounds of fish, shellfish and squid valued at $30 million is being shipped to RI from outside of the state for processing.
- 60% of survey respondents indicated their facility was underutilized and they cited the most notable impediment to growth being the raw product supply. This has led to a vertical integration approach to some processing businesses through either forward contracting with fishing vessels or direct fishing vessel ownership.
- RI is viewed as a regional service support destination for fishing vessels operating out of the southern New England and Mid-Atlantic regions due to contractions in smaller ports.
- The last year in which Rhode Island landings were below $60 million, (the 2010 value) was in 1982 ($56.7 million). When the 1982 value is adjusted for inflation using the "consumer board inflation index" it translates to a 2010 value of $126 million. Total landings volume over the period 2000-2010 are decidedly uneven trending downward from 2006-2010 with landed value experiencing less fluctuation.
- There is evidence of general price stagnation, particularly for species such as scup, squid, and whiting which are important to Rhode Island's small mesh trawl fisheries.
- More directed research about price trends and impacts is needed to both quantify and validate current price structure issues. Simply comparing average prices, even adjusting for inflation does not account for changes in quantity of supply, economic conditions and competing supply sources. Different approaches, such as price indexing - i.e. tying price changes to other factors like changes in supply could be considered.
- The seafood processing industry in Rhode Island is characterized by a relatively small number of establishments that exclusively or primarily process seafood and many more that process seafood as one of a number of related activities.
- More information on the volume and value of RI seafood processing, the number of establishments and type of processing they employ, total sales, payroll and employment records, source of fish and shellfish processed, and production capacity is needed to accurately characterize and profile the RI seafood processing sector.

CHAPTER 2
Available Resources

Commercial Species Targeted – Section 2.0

Rhode Island's marine fisheries are divided into three major sectors: shellfish, crustaceans, and finfish. The shellfish sector includes oysters, soft-shell clams, whelks, squid, and most importantly quahogs. The crustaceans sector is primarily comprised of the highly valued American lobster, but with increasing contributions in recent years from crab, particularly the rock crab, *Cancer borealis*, as lobster abundance has decreased in some areas or has become economically unprofitable on a seasonal basis. The finfish sector targets a variety of species including: winter, yellowtail, and summer flounder, tautog, striped bass, black sea bass, scup, bluefish, butterfish, whiting, skate, monkfish, cod and dogfish. As delineated in the previous chapter, a wide range of gear – including otter trawl nets, floating fish traps, lobster traps, gill nets, fish pots, rod and reel, and clam rakes - are used to harvest these species. The state currently issues about 2,441 commercial fishing licenses (RIDEM 2011d).

Commercial Fishing Gear Used – Section 2.1

The types of commercial fishing gear used in Rhode Island can be generally divided into two categories - mobile and fixed gear fisheries. Mobile-gear fisheries are those that are deployed from a moving vessel while catching fish. Typical mobile gear used includes: trawls - including bottom, mid-water, and pair trawl with large and small mesh net designs; scallop, surfclams and ocean quahog dredges, purse seines, bullrakes, and handlines. Fixed-gear fisheries are set in one location to capture fish and later retrieved. Fixed-gear fisheries include: gillnets, pound nets, ocean (floating) traps; lobster, crab and fish pots.

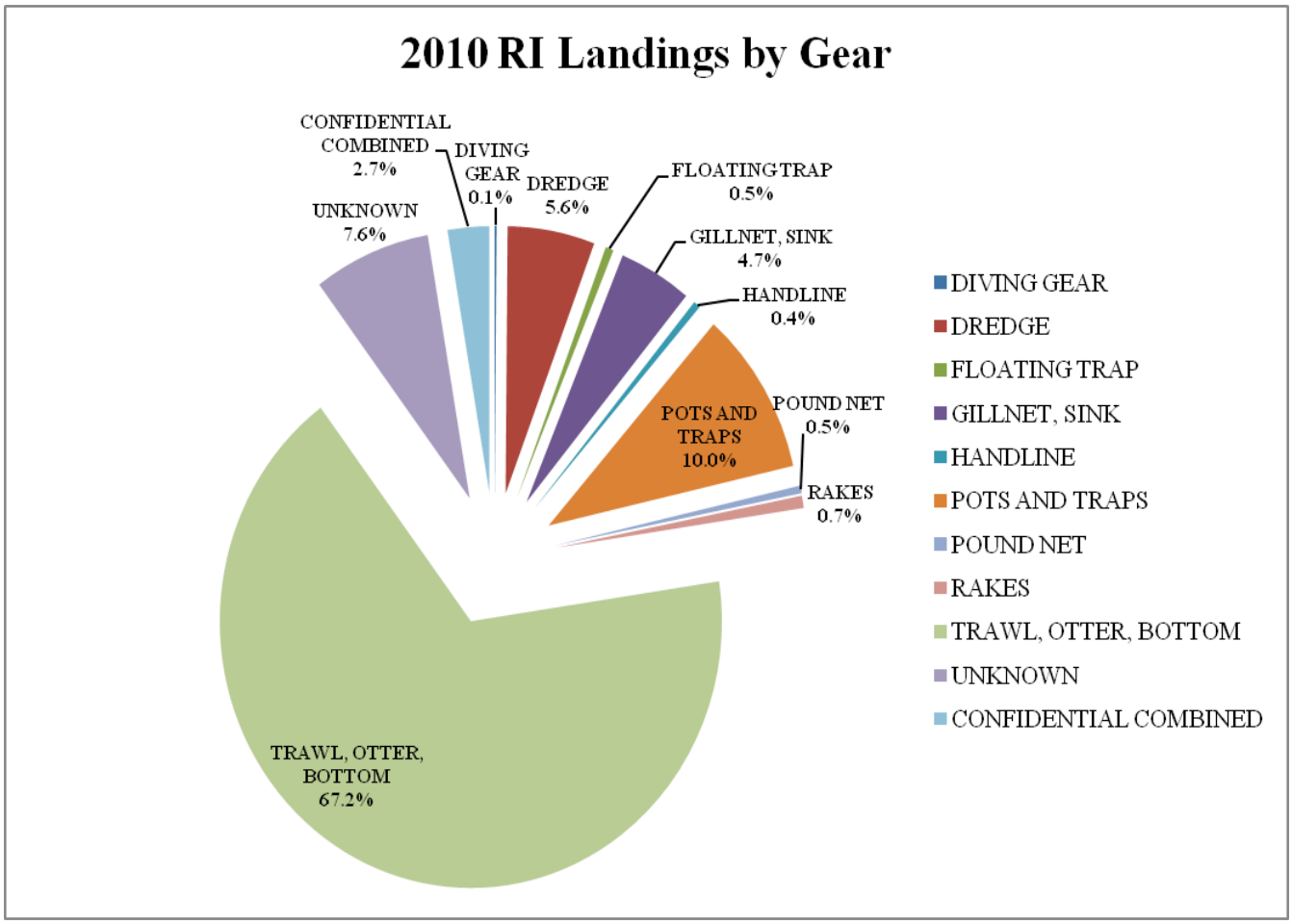
Table 2.1 shows landings in pounds by gear type and value and Figure 2.1 shows landings by gear type in pounds by percent for total RI landings for 2010. For added perspective, Table 2.2 and Figure 2.2 show commercial fishing gear types used by RI fishermen by average pounds, value, and percent of landings for 1999 - 2008. The principle mobile gear type used is trawl. In 2010, combined trawl gear types accounted for 46% of landed value and 67.2% of landed pounds. Combined trawl gear for the years 1999-2008 on average caught 60% of Rhode Island landings in terms of total pounds. In 2010, pots/traps, the second ranked gear type accounted for 25% of landed value and 10% of landed pounds. Combined pots/traps for the years 1999-2008, on average, caught about 14.4% of Rhode Island's total landings (Rhode Island Coastal Resource Management Council, 2010).

Table 2.1: Rhode Island Landings by Gear Type, Pounds and Value 2010:

GEAR	POUNDS	VALUE
DIVING GEAR	91,518	$ 542,163
DREDGE	176,258	$ 171,265
DREDGE, SCALLOP	283,011	$ 2,164,793
DREDGE, SURF CLAM + OCEAN QUAHO	3,681,294	$ 2,788,734
FLOATING TRAP	380,839	$ 251,693
GILLNET, SINK	3,477,723	$ 2,920,767
HANDLINE	327,927	$ 763,983
POTS AND TRAPS	1,669,960	$ 3,896,302
POTS, LOBSTER, INSHORE	181,893	$ 667,744
POTS, LOBSTER, OFFSHORE	5,518,283	$ 10,254,313
POUND NET	338,963	$ 397,840
RAKES	548,202	$ 2,962,297
TRAWL, OTTER, BOTTOM	49,529,466	$ 27,452,571
UNKNOWN	5,569,032	$ 3,393,818
CONFIDENTIAL COMBINED	1,981,246	$ 786,902
TOTAL	73,755,615	$ 59,415,185

Information provided by Kelley Mcgrath (NMFS) Dealer Data (Differences in total landings data result from the data being accessed before finalized for 2010)

Figure 2.1: Rhode Island Percent of Landings (Pounds) by Gear Type 2010:



Information provided by Kelley Mcgrath (NMFS) Dealer Data

Figure 2.2: Rhode Island Landings in Pounds by Gear Type for 1999-2008 (RI CRMC, 2010)

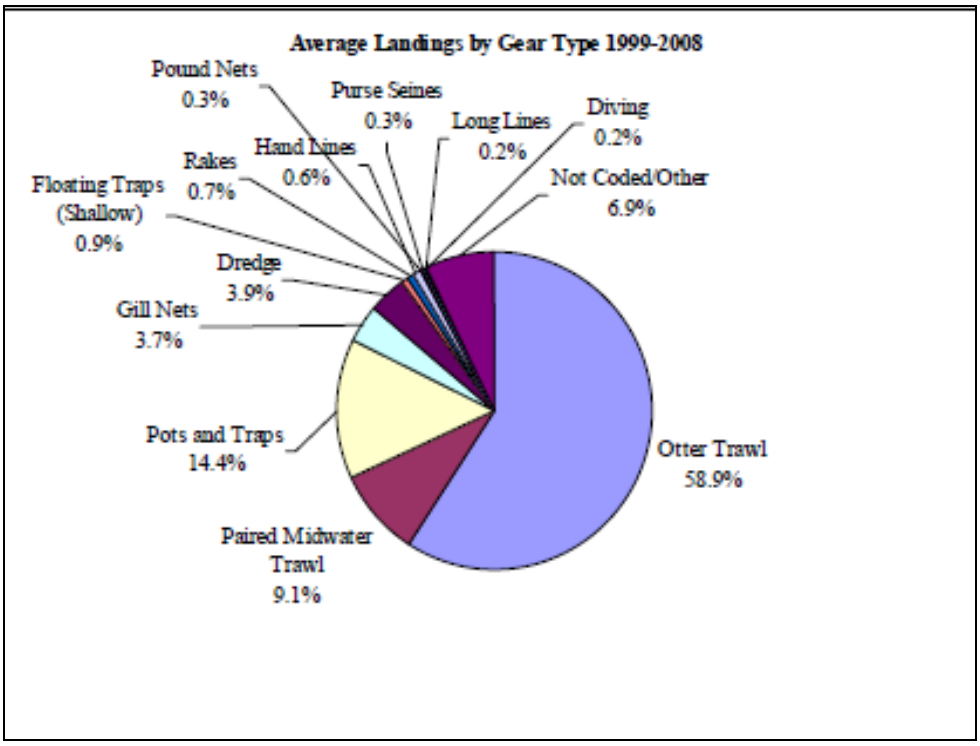


Table 2.2: Rhode Island Landings by Gear Type, 1999-2008 (RI CRMC, 2010)

Gear	Average Landings in Pounds 1999-2008	Average Dollar Value of Landings 1999-2008
Otter Trawl, Bottom, Fish	59,131,329	$29,159,418.80
Trawl Midwater, Paired	10,380,727	$686,795.60
Pots And Traps, Other	9,968,096	$6,567,691.60
Not Coded/Other	7,898,880	$9,646,535.00
Otter Trawl, Midwater	7,649,674	$480,073.40
Gill Nets	4,245,477	$3,386,439.60
Pots And Traps, Lobster Inshore	2,446,071	$9,148,139.80
Dredge, Clam	1,874,640	$1,095,295.80
Pots And Traps, Lobster Offshore	1,780,073	$5,687,875.70
Dredge, Other	1,775,492	$4,312,557.70
Floating Traps (Shallow)	983,610	$776,261.70
Rakes	812,491	$4,556,840.90
Lines Hand, Other	654,659	$1,144,331.30
Pound Nets	364,243	$297,889.00
Purse Seines	297,909	$12,837.30
Long Lines	275,902	$636,117.20
Pots And Traps, Fish	186,843	$237,619.80
Dredge, Sea Scallop	173,667	$947,181.00
Diving Outfits, Other	171,106	$856,444.80
Lines, Troll, Other	62,752	$21,311.30
Hoes	61,181	$351,099.00
Tongs	38,513	$214,584.30
By Hand, Other	35,083	$90,976.00
Otter Trawl, Bottom, Other	28,628	$52,474.60

From the above analysis, the total average landings in pounds during the period 1999-2008 for all gear was 111,297,046 and during the same period the average dollar value for all gear was $80,366,791.20.

Fishing Effort – Section 2.2

Fishing effort is defined as, the amount of fishing that has occurred to produce landings. To characterize this component of the profile, information about fishing effort, the number of fishing trips, and crew numbers were obtained from State Catch and Effort Logbooks and Federal Vessel Trip Reports (VTR's).

Fishing effort varies widely throughout the year and from year to year, depending on many variables; the number of individual fishermen, number of active vessels, gear type, target species, operating cost, regulatory constraints, and market needs. The summaries of fishing effort presented are a reminder of the dynamic nature of commercial fishing activity. Wild caught fish - "fish that have tails and swim" - refers to a variability that is part and parcel of fishing effort changing harvest locations and intensity throughout the year. This is the result of fishermen adapting to the movement and availability in their fishing area of their targeted species. There is evidence that the intensity and location of fishing effort changes throughout the year, due in part to regulatory and area harvest restrictions, and because fishermen must follow and adapt to the movement of their targeted species over wide ranges. At the same time there is some anecdotal evidence that individual fishing effort has in fact increased in certain fisheries to maintain economic viability. In future work, fishing effort together with cost adjusted revenues based on landings and ex-vessel (first sale) prices, can provide a more comprehensive estimate of vessel performance and fishing effort.

The most recent and comprehensive analysis of effort covers valid/active Rhode Island multispecies groundfish permit holders. The value of landings for all species and all trips for home-port, active multi-species groundfish permitted vessels for the time period of 2007 through 2010 are presented in Table 2.3.

Table 2.3: Effort of Multispecies Groundfish - Permitted RI Home-ported Vessels 2007-2010

Home-port State - RI	**Fishing Year**			
	2007	**2008**	**2009**	**2010**
Landing Value All Trips/All Species (Millions)	**34.7**	**30.8**	**23.5**	**26.9**
Percent of Total Landings	**47%**	**48%**	**38%**	**45%**
Active Multispecies Permit Vessels Numbers All Trips All Trip Lengths	**107**	**100**	**93**	**85**
Total Crew Position	**301**	**278**	**268**	**253**
Total Crew Trips	**16,353**	**14,515**	**13,676**	**12,861**
Total Crew Days	**24,359**	**22,023**	**20,418**	**19,954**
Crew Days/Crew Trips	**1.49**	**1.52**	**1.49**	**1.55**

(Kitts et al 2011)

The above analysis includes all fish landed and sold in all states by RI home-ported vessels with multi-species permits during fishing years (May 1 – April 30th) 2007-2010. An active vessel is defined as having revenue from the landings of any species for all trips within the fishing year. Identification as a RI state home-ported vessel does not necessarily identify where fish from that vessel are landed, but rather, where the vessel is moored as provided by the owner on the vessel permit application. The homeport identification was used because it gives an indication of the benefit received by RI vessel owners and crew, and the likely fishing related businesses servicing the fishing vessel. Data on vessel landings come from seafood dealer reports.

Information about the number of trips and crew size are from vessel trip reports (VTR's) and Catch and Effort Logbooks. The standard deviation can be used to show the degree of variability, and if large, can indicate that these values are widely dispersed.

The number of crew positions and the duration of fishing trips is information contained on Federal VTR's and State Catch and Effort Logbooks. The number of crew positions is a measure of the availability of jobs. Total crew trips were calculated by adding crew size of all trips taken. Because most crew members are paid on a per trip basis the crew trip indicator is a measure of the total opportunities for crew to earn revenue and a share of the catch. The number of crew days is calculated by multiplying a trip's crew size by days absent from port and adding the totals. Crew days can be viewed as an indicator of time invested in the crew share, the portion of the trip revenues received at the end of a trip. The trends for the described categories contained in this analysis reflect a reduction in overall measured fishing effort by Rhode Island multispecies groundfish active federal vessel permit holders for 2007-2010.

Beyond these impacts, management and regulatory changes can induce changes in the relative distribution of types and location of vessels operating in a fishery. What is not shown in this analysis is how the mix of vessel types in terms of vessel size (length) and revenue have been affected. For the entire Northeast multispecies permitted active vessels there have been declines in all vessel size categories from 2007-2010 (30' and less, 30' to 50', 50' to 75', and over 75') (Kitts et al. 2011). Information on size distribution changes specific to the Rhode Island fleet was not available.

A more generalized fishing effort based on the number of fishing trips by gear type for state licensed and federally permitted vessels for 2010 follows in Table 2.4:

Table 2.4: Fishing Effort by Gear Type & Number of Trips 2010

Fishing Gear	Number of Trips
By Hand (no SCUBA)	50
Crab Trap	122
Dip Net	1
Dredge	271
Floating Fish Trap	471
Gill Net	3,090
Otter Trawl	5,958
Pots & Traps (Fish)	4,125
Pots & Traps (Hagfish)	3
Pots & Traps (Lobster)	9,530
Pots & Traps (Other)	116
Purse Seine	8
Rakes	25,295
Rod & Reel	10,574
Scuba Gear	26
Total	**59,640**

Information provided by Daniel Costa ACCSP Coordinator, Division of Fish & Wildlife RI DEM – SAFIS (VTR data and Catch & Effort Logbooks) Shellfish is not reported on VTRs or Catch and Effort Logbooks, Dealer data was used assuming shellfish trips were the gear rake.

In order to understand specific fishing effort of the more important RI fisheries, the following information has been summarized for the lobster fishery (Table 2.5: Rhode Island Lobster Fishing Trips by Area Fished and Gear 2010), shellfish fishery (Table 2.6: Number of Trips by Individual Shellfish Species by Port 2010) and RI licensee activity (Table 2.7: RI Active vs. Non-Active Licenses 2010).

Table 2.5: Rhode Island Lobster Fishing Trips by Area Fished and Gear 2010

Gear	LCMA 2	LCMA 3	LCMA 4	Total
Lobster Trap	8,586	944	0	9,530
All Other Gears	676	107	3	786
Total Number of Trips	9,262	1051	3	10,316

All other gear includes: Otter Trawl, Gillnet, Fish Pot & Crab Pot
Information provided by Thomas E. Angell RIDEM / Fish and Wildlife / Marine Fisheries

Table 2.6: Number of Trips by Individual Shellfish Species by Port 2010

	CLAM, RAZOR, ATLANTIC	CLAM, NORTHERN QUAHOG	CLAM, SOFT	MUSSEL, BLUE	OYSTER, EASTERN	SCALLOP ,BAY	SCALLOP, SEA	
PORT	# TRIPS	# TRIPS	# TRIPS	# TRIPS	# TRIPS	# TRIPS	# TRIPS	TOTAL
Bristol		2,877	148		7			3,032
Charlestown		8	2					10
East Greenwich		5,098	325		13			5,436
Jamestown		8						8
New Shoreham							5	5
Newport		122	9				6	137
North Kingstown (local name Wickford)	10	3,338	252	139	9			3,748
Point Judith		797	174	1	6	1	94	1,073
Portsmouth		1,588	84					1,672
Rhode Island (State)							2	2
South Kingstown (Town of)		1	6					7
Warren		2,512	119				5	2,636
Warwick (RR name Apponaug)		6,955	532	38	4			7,529
Total Trips								25,295

Information provided by Daniel Costa ACCSP Coordinator Division of Fish & Wildlife RIDEM -SAFIS data (Dealer Reports)

The shellfish fisheries focus below briefly summarizes the important characteristics of the valuable inshore shellfisheries of Narragansett Bay.

Shellfish Fishery Focus

The shellfish of the inshore Narragansett Bay complex are an important resource for the Rhode Island shellfishermen. The species include, razor clams, Northern quahog, soft clam, blue mussels, Eastern oysters, and bay scallops. Northern Quahogs are the most important shellfish species landed in RI with a landing value of $3.3 million in 2010. Soft Clams are the second most valuable species with a landing value of $848 thousand in 2010. In 2010, RI shellfishermen landing the above species made 25,183 fishing trips landings 3.6 million pounds of shellfish worth $4.3 million.

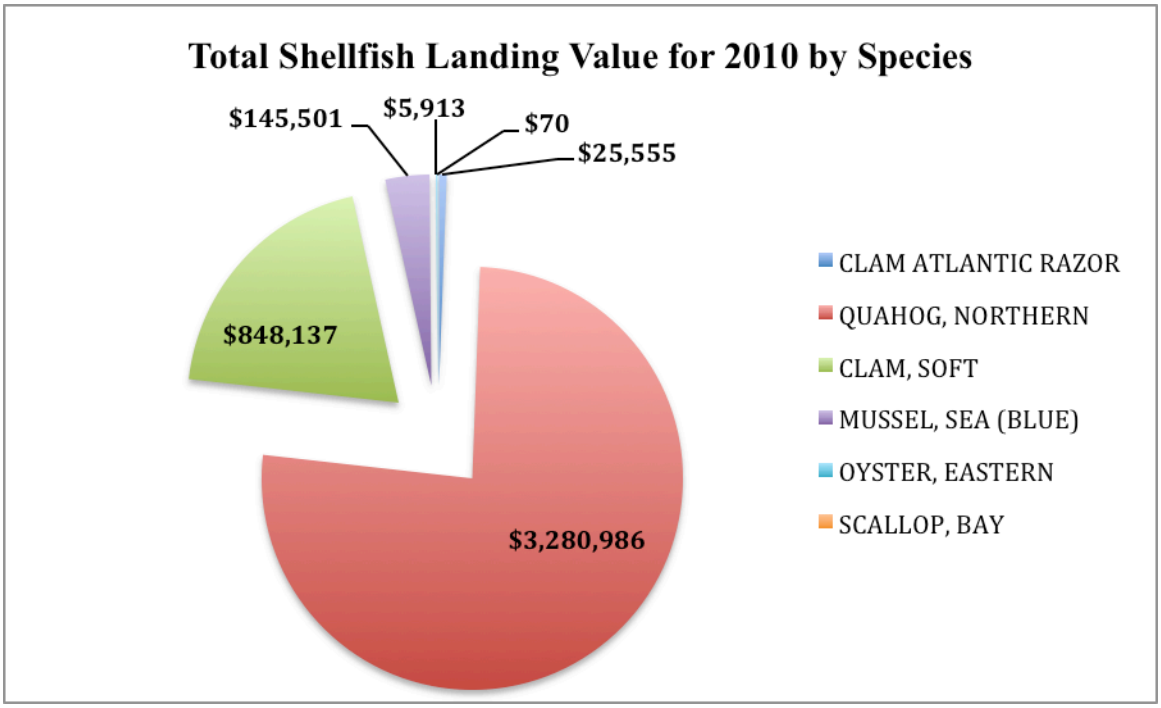


Table 2.7: RI Active vs. Non-Active Licenses 2010

License Type	License Count	Active License
Commercial Fishing License	449	136
Landing Permits	120	48
Multipurpose	887	655
Principal Effort	735	409
Shellfish O65	201	16
Student Shellfish	49	37
Unknown		13
Total	2441	1314

Active Permits = Permit Holders that Reported Landings in 2010
Source: Daniel Costa ACCSP Coordinator Division of Fish & Wildlife RIDEM

The Rhode Island license history description below details the changes in licensure issuance by individual license categories for 2006-2011. For the major category groups, i.e. Multi-Purpose license, Principal Effort license, Commercial Fishing license, declines for each category in varying degrees occurred from 2006-2011.

Rhode Island License History
2006-2011

	2006	2007	2008	2009	2010	2011
MULTI-PURPOSE LICENSE	1,017	973	939	917	887	867
GILLNET ENDORSEMENT	275	263	257	251	241	236
DOCKSIDE SALE ENDORSEMENT	82	205	261	276	272	261
MIDWATER/PAIR TRAWL ENDORSEMENT	N/A	N/A	116	123	123	124
PURSE SEINE ENDORSEMENT	N/A	N/A	114	128	136	137
PRINCIPAL EFFORT LICENSE	929	861	810	776	735	713
LOBSTER ENDORSEMENT	46	44	43	40	38	37
NON-LOBSTER CRUSTACEAN ENDORSEMENT	16	15	21	20	22	28
QUAHOG ENDORSEMENT	586	538	499	473	450	426
NON-QUAHOG ENDORSEMENT	434	402	0	0	0	0
RESTRICTED FINFISH ENDORSEMENT	298	283	270	265	248	261
NON-RESTRICTED FINFISH ENDORSEMENT	131	134	126	128	127	127
SOFTSHELLED CLAM ENDORSEMENT	N/A	N/A	358	325	304	284
DOCKSIDE SALE ENDORSEMENT	4	11	15	13	14	16
MIDWATER/PAIR TRAWL ENDORSEMENT	N/A	N/A	4	3	5	9
PURSE SEINE ENDORSEMENT	N/A	N/A	5	6	5	7
OTHER SHELLFISH ENDORSEMENT (replaces non-quahog endorsement)	N/A	N/A	306	278	265	249
COMMERICAL FISHING LICENSE	397	464	421	433	449	394
LOBSTER ENDORSEMENT	38	32	27	22	19	17
NON-LOBSTER CRUSTACEAN ENDORSEMENT	105	118	100	102	119	120
QUAHOG ENDORSEMENT	94	104	116	118	127	141
NON-QUAHOG ENDORSEMENT	247	323	0	0	0	0
RESTRICTED FINFISH ENDORSEMENT	13	11	11	14	18	0
NON-RESTRICTED FINFISH ENDORSEMENT	242	261	240	256	273	238
SOFTSHELLED CLAM ENDORSEMENT	N/A	N/A	235	206	191	182
DOCKSIDE SALE ENDORSEMENT	2 17	17	24	25	22	20
MIDWATER/PAIR TRAWL ENDORSEMENT	N/A	N/A	21	38	39	31
PURSE SEINE ENDORSEMENT	N/A	N/A	24	35	28	28
OTHER SHELLFISH ENDORSEMENT (replaces non-quahog endorsement)	N/A	N/A	179	199	206	201
OVER 65 SHELLFISH LICENSE	130	136	160	179	201	217
STUDENT SHELLFISH LICENSE	71	60	54	54	49	55

Provided by RI DEM License Office (Margaret McGrath)
As of 5/5/11

Harvest Limits - Section 2.3

Rhode Island finfish, shellfish and crustacean resources and related fishing activities are managed by agencies and regulatory bodies at different levels of government (federal, state, and regional), all of which have varying levels of jurisdiction over the different species targeted by Rhode Island fishermen.

Entities included in managing these fisheries are: Atlantic States Marine Fisheries Commission (ASMFC), Rhode Island Department of Environmental Management (RIDEM), RI Marine Fisheries Council (advisory board), and the NOAA/ National Marine Fisheries Services (NMFS) which act on behalf of the New England Fishery Management Council, and the Mid-Atlantic Fishery Management Council. Table 2.8 lists the harvest limits, management responsibilities, and management regulations of RI commercially targeted species.

Table 2.8: Harvest Limits 2010

SPECIES	Management Agency	2010 DAH/ABC Levels (MT)	2010 State Quota (LBS)	Minimum Size	Season	Current Trip/Trap Limit**	Availability of new licences
Summer Flounder	MAFMC	n/a	2,019,915	14'	Sub-periods - Closed Fri/Sat 6/1 to 10/31	100 lbs/vsl/day	5:1 Exit/Entry Ratio
Scup	MAFMC	n/a	2,336,468	9"	Sub-periods	5,000 lbs/vsl/wk	5:1 Exit/Entry Ratio
Scup (floating traps)	MAFMC	n/a	2,336,468	9"	May 1 - Oct 31	No limit	5:1 Exit/Entry Ratio
Black sea bass	MAFMC	n/a	184,335	11"	Sub-periods - Closed 8/1 - 8/31	50 lbs/vsl/day	5:1 Exit/Entry Ratio
Bluefish	MAFMC	n/a	638,273	None	Jan 1 - June 30/July 1 - Dec 31	No limit	n/a
Squid(Loligo)	MAFMC	18,667	n/a	n/a	Tri-mester (Jan-Apr)(May-Aug)(Sep-Dec)	Quota Monitored Species	Moratorium
Squid(Illex)	MAFMC	24,000	n/a	n/a	Quota Monitored	Quota Monitored Species	Moratorium
Butterfish	MAFMC	485	n/a	n/a	Quota Monitored	250 lbs/vsl/day	Moratorium
Mackerel	MAFMC	115,000	n/a	n/a	Quota Monitored	Quota Monitored Species	Moratorium

SPECIES	Management Agency	2010 DAH/ABC Levels (MT)	2010 State Quota (LBS)	Minimum Size	Season	Current Trip/Trap Limit**	Availability of new licences
Skates	NEFMC	41,080	n/a	n/a	Days at Sea (May-Aug) (Sep-Apr)	2,600/4,100 lbs of wings	n/a
Yellowtail	NEFMC	n/a	n/a	13"	Days at Sea - Sector Management	Quota Monitored Species	n/a
Witch Flounder	NEFMC	n/a	n/a	14"	Days at Sea - Sector Management	Quota Monitored Species	n/a
American Plaice	NEFMC	n/a	None	14"	No closed season	No limit	n/a
Haddock	NEFMC	n/a	None	19"	Days at Sea - Sector Management	Quota Monitored Species	n/a
Red Hake	NEFMC	n/a	None	n/a	All Year	No limit	n/a
Dogfish(Smooth)	ASMFC	n/a	n/a	None	All Year	No limit	n/a
Dogfish(Spiny)	NEFMC	n/a	n/a	None	May 1 - April 30	3,000 lbs/vsl/day	n/a
Monkfish	NEFMC	n/a	n/a	17" whole/11" tail	May 1 - April 30	550 lbs tails/1,826 lbs whole vsl/day	n/a
*Winter Flounder	NEFMC	n/a		12"	No closed season	50 lbs/vsl/day	5:1 Exit/Entry Ratio

SPECIES	Management Agency	2010 DAH/ABC Levels (MT)	2010 State Quota (LBS)	Minimum Size	Season	Current Trip/Trap Limit**	Availability of new licences
Herring(Atlantic)	NEFMC	n/a	n/a	None	Closed 10/1 - 10/21	Area 1a 2,000 lbs/day - Area 2a by permit	n/a
Sea Scallops	NEFMC	29,578	n/a	3.5" shell height	Limited Access/Days at Sea	Individual Fishing Quota	Moratorium
Silver Hake	NEFMC	n/a	n/a	None	All Year	30,000	n/a
Striped Bass	ASMFC	n/a	239,963	34"	June 6 - Aug 31/Sept 13 - Dec 31 - Closed Fri/Sat	5 fish	5:1 Exit/Entry Ratio
Striped Bass (floating traps)	ASMFC	n/a	n/a	26"	No closed season	No limit	5:1 Exit/Entry Ratio
Lobster	ASMFC	n/a	n/a	3-3/8"	n/a	Historic allocation: LCMA 2 up to800 traps/vessel (permit) or license; LCMA 3 up to 1945 traps/vessel (permit)	Moratorium on issuance of new licenses/permits
Tautog	ASMFC	n/a	42,940	16"	Sub-periods	Closed	5:1 Exit/Entry Ratio
Shad(American)	ASMFC	n/a	None	None	1/1 - 12/31	Prohibited in state waters	n/a
Menhaden	ASMFC	n/a	n/a	None	1/1 - 12/31	120,000 lbs/vsl/day	n/a

SPECIES	Management Agency	2010 DAH/ABC Levels (MT)	2010 State Quota (LBS)	Minimum Size	Season	Current Trip/Trap Limit**	Availability of new licenses
Horseshoe crabs	ASMFC	n/a	n/a	None	Closed 48hrs before/after new/full moon in May-June-July	5 pieces	n/a
American eel	ASMFC	n/a	None	6"	No closed season	No limit	n/a
Quahogs	RIDEM/RIMFC	n/a	n/a	1" hinge width	Closed Sunset - Sunrise	No limit	2:1 Exit/Entry Ratio
Oysters	RIDEM/RIMFC	n/a	n/a	3" longest axis	Closed Sunset - Sunrise	No limit	n/a
Soft-shell clams	RIDEM/RIMFC	n/a	n/a	2" longest axis	Closed Sunset - Sunrise	No limit	5:1 Exit/Entry Ratio
Whelks	RIDEM/RIMFC	n/a	n/a	2.5" diameter	Closed Sunset - Sunrise	No limit	n/a
Bay scallops	RIDEM/RIMFC	n/a	n/a	No seed possession	Closed Sunset - Sunrise	No limit	n/a
Blue Crabs	RIDEM/RIMFC	n/a	n/a	5"	Closed Sunset - Sunrise	25 pieces except when taken by scoop or crab net, trot or handline	n/a

*Restricted Finfish
*The harvesting/possession of winter flounder is prohibited in Narragansett Bay north of the Colregs line of Demarcation/ Allowed Open Areas Only
**Limits as of 7/19/11
DAH=Domestic Annual Harvest
ABC=Allowable Biological Catch

Rhode Island Catch Share Program Overview and Involvement - Section 2.4

On May 1, 2010, a new management program – Amendment 16 to the Northeast Multispecies Fishery Management Plan (FMP) – was implemented for the New England groundfish fishery. It was designed to comply with catch limit constraints and stock rebuilding deadlines required under the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSA). The new groundfish management program contained two significant changes. The first consisted of "hard quota" annual limits on the total allowable catch (TAC) for all of the 20 stocks in the groundfish complex. The second expanded the use of fishing sectors, a type of catch share program whereby groups of fishing vessels (i.e. sectors) are each allotted a share (quota) of the total annual groundfish TAC. Sectors received quota for 9 of 14 groundfish species in the FMP and became exempt from many of the effort controls that were enacted prior to May 1, 2010 such as multispecies Days-at-Sea (DAS) limitations.

The New England Fishery Management Council (NEFMC) defines a "sector" as a group of persons holding limited-access vessel permits under the fishery management plan through which the sector is being formed, who have voluntarily entered into a contract and agree to certain fishing restrictions for a specified period of time, and which have been granted a total allowable catch (TAC) in order to achieve objectives consistent with the applicable FMP goals and objectives. All vessels with a federal limited access groundfish permit are eligible to join a groundfish sector. The following is a summary of the vessels home-ported in Rhode Island in a sector for 2010.

Forty-nine (49) vessels home-ported in Rhode Island were part of multi-species groundfish sectors in 2010. Fifty (50) additional vessels were part of the common pool. The sectors and the number of Rhode Island vessels that participated in each is as follows. The Sustainable Harvest Sector had 1 vessel, Northeast Fishery Sector (NEFS) 13 had 16 vessels, NEFS 5 had 27 vessels, NEFS 6 had 2 vessels, NEFS 7 had 1 vessel and NEFS 8 had 2 vessels. Fifty- three (53) vessels landed in Point Judith and 16 in Newport, RI. The average length of the vessels was 56 feet and ranged from 12.8 feet to 119.4 feet. The average horsepower was 440 and ranged from 25 to 1,350 HP.

Seventeen sectors were created[1]. Each sector established its own rules for using its allocations, but the allocated catch restrictions are applicable to the sector as a unit (i.e., not to individual vessels in the sector). Vessels that joined sectors were allocated 98% of the total annual groundfish quotas, based on their level of historical activity in the groundfish fishery. Approximately half (46%) of the vessels with groundfish permits opted to remain in the common pool despite the relatively small amount of quota associated with these vessels. Common pool vessels act independently of one another with each vessel constrained by the number of DAS it can fish, by trip limits, and by all of the area closures. These restrictions help ensure the groundfish catch of common pool vessels does not exceed the common pool's allocation of the total annual groundfish quota for all stocks (about 2% for 2010) before the end of the fishing year (May-April).

This report provides an interim evaluation (May 1, 2010 – January 31, 2011) of fishing year 2010 (May 1, 2010 – April 30, 2011) of the economic and social performance of the groundfish fishery[2]. In this report, all references to year are for the fishing year. The report presents two types of comparisons to evaluate performance: year-to-year and sector-to-common pool. The first involves comparing indicators of fishing performance for the first 9 months of the 2010 fishing year with the average fishing performance during the first 9 months of fishing years 2007 through 2009. The second involves comparisons of the performance of sector and common pool vessels within the 2010 fishing year.

[1]It should be noted that two Sectors, the Georges Bank Cod Hook Sector (operating since 2004) and the Georges Bank Cod Fixed Gear Sector (implemented in 2006), operated in 2008 and 2009 but each only had an allocation of Georges Bank cod (*Gadus morhua*). In fishing year 2010, all members of the George Bank Cod Hook Sector joined the Georges Bank Cod Fixed Gear Sector.

[2]This report falls under the fisheries performance measures program developed by the NEFSC Social Sciences Branch in 2009 with extensive consultation from stakeholders in the Northeast region. See www.nefsc.noaa.gov/read/socialsci/catchshares.
This information was obtained from Mark Grant, Sector Policy Analyst, Sustainable Fisheries Division from the National Marine Fisheries Service.

The performance measures used in the report cover landings, revenue, number of vessels, effort, average vessel performance, distribution issues, and employment. Revenues are based on landings and ex-vessel (first sale) prices, and together with fishing effort, provide an indication of vessel performance. Distribution is measured by fleet diversity (by vessel size and vessel revenue categories) and consolidation of revenues among vessels. Employment is measured by the number of crew positions and a measure that incorporates average crew sizes and the number of trips and days taken per year.

The Rhode Island Fluke Sector Fleet Focus below describes sector development, the landings, fishing effort, and numbers of licenses. Management responsibilities and challenges are outlined to help assess current fishery conditions.

Rhode Island Fluke Sector Fleet Focus

The RI Fluke Sector Allocation Pilot Program began in 2009 with eight vessels. The program involved the allocation of a portion of the state's commercial fluke quota based on the average annual landings of those vessels over a specific time period from 2004-2008. The sector was not bound to traditional regulations as other commercial vessels were, for example, landing limits and fishery quotas. Participants are required to retain and land all legal-sized fluke (14 inches and over) and participants are further required to count against their allocation all discards of undersized fluke (under 14 inches).

In 2010 the RI Department of Environmental Management approved the application of the Rhode Island Fluke Conservation Cooperative (RIFCC) to participate in a 26-week continuation of Rhode Island's fluke sector allocation pilot program. Eleven (11) vessels participated in 2010. The 2010 program was an expansion on the 2009 pilot program as an experiment to assess the effect of a catch share system on the fishery as an alternative means of managing the quota. The RI fluke sector landed 230,138 lbs. of fluke worth $601,976 in 2010. Point Judith is the dominant port in the RI fluke sector with 98% of fluke landing value. For 2011, thirteen (13) vessels are participating in the RI fluke sector. For more information on the fluke sector value of landings by port and gear type see the summaries below:

RI Fluke Sector Value of Landings ($) by Port & Gear (All Species)

Gear \ Port	Little Compton	New Shoreham	Newport	Point Judith	Total Value All Gear All Ports
Dredge	confidential	N/A	N/A	N/A	$0.00
Gill Net	$110,009.55	N/A	confidential	confidential	$110,009.55
Otter Trawl	N/A	confidential	N/A	$550,394.40	$550,394.40
Not Coded	N/A	N/A	N/A	$2,164,058.73	$2,164,058.73
Other Trawl	N/A	N/A	N/A	confidential	$0.00
Pots & Trap	N/A	N/A	N/A	confidential	$0.00
Total	$110,009.55	$0.00	$0.00	$2,714,453.13	$2,832,613.00

The confidential values are included in the overall total value.

RI Fluke Sector Value of Landings ($) by Port & Gear (Fluke)

Gear \ Port	Little Compton	New Shoreham	Point Judith	Total Value All Gear All Ports
Dredge	confidential	N/A	N/A	$0.00
Gill Net	$13,863.25	N/A	N/A	$13,863.25
Otter Trawl	N/A	confidential	$22,791.11	$22,791.11
Not Coded	N/A	N/A	$563,636.60	$563,636.60
Other Trawl	N/A	N/A	confidential	$0.00
Total	$13,863.25	$0.00	$586,427.71	$601,976.00

The confidential values are included in the overall total value.

Section Endnotes: Section 2.5

- Major types of gear used for RI landings: Rakes, rod & reel, pots & traps, otter trawl, gill net, floating fish trap, and dredge.
- 2010 – Estimate number of fishing trips by all gear type is 59,640, with a total of 77.4 million pounds of fish landed in Rhode Island.
- Rhode Island's marine fisheries are divided into three major sectors: shellfish, crustaceans, and finfish.
- The state currently issues about 2,441 commercial fishing licenses.
- In 2010, combined trawl gear types accounted for 46% of landed value and 67.2% of landed pounds.
- In 2010, pots/traps, the second ranked gear type accounted for 25% of landed value and 10% of landed pounds.
- Fishing effort is defined as, the amount of fishing that has occurred to produce landings.
- There is some anecdotal evidence that individual fishing effort has in fact increased in certain fisheries to maintain economic viability. In future work fishing effort, together with cost adjusted revenues based on landings and ex-vessel (first sale) prices can provide a more comprehensive estimate of vessel performance and fishing effort.
- Rhode Island finfish, shellfish and crustacean resources and related fishing activities are managed by several different agencies and regulatory bodies at different levels of government (federal, state, and regional) which have jurisdiction over the different species targeted by Rhode Island fishermen.
- Forty-nine (49) vessels home-ported in Rhode Island were part of multi-species groundfish sectors in 2010. Fifty (50) additional vessels were part of the common pool.
- The RI fluke sector landed 230,138 lbs. of fluke worth $601,976 in 2010. Point Judith is the dominant port in the RI fluke sector with 98% of fluke landing value. For 2011, thirteen (13) vessels are participating in the RI fluke sector.

CHAPTER 3
Rhode Island's Seafood Industry Economic Significance

Economic Contributions – Section 3.0

The economic contributions and impacts of the seafood industry to the overall economy of Rhode Island extend beyond the simple measurement of income and employment generated from the dockside sales of commercially harvested fish and shellfish.

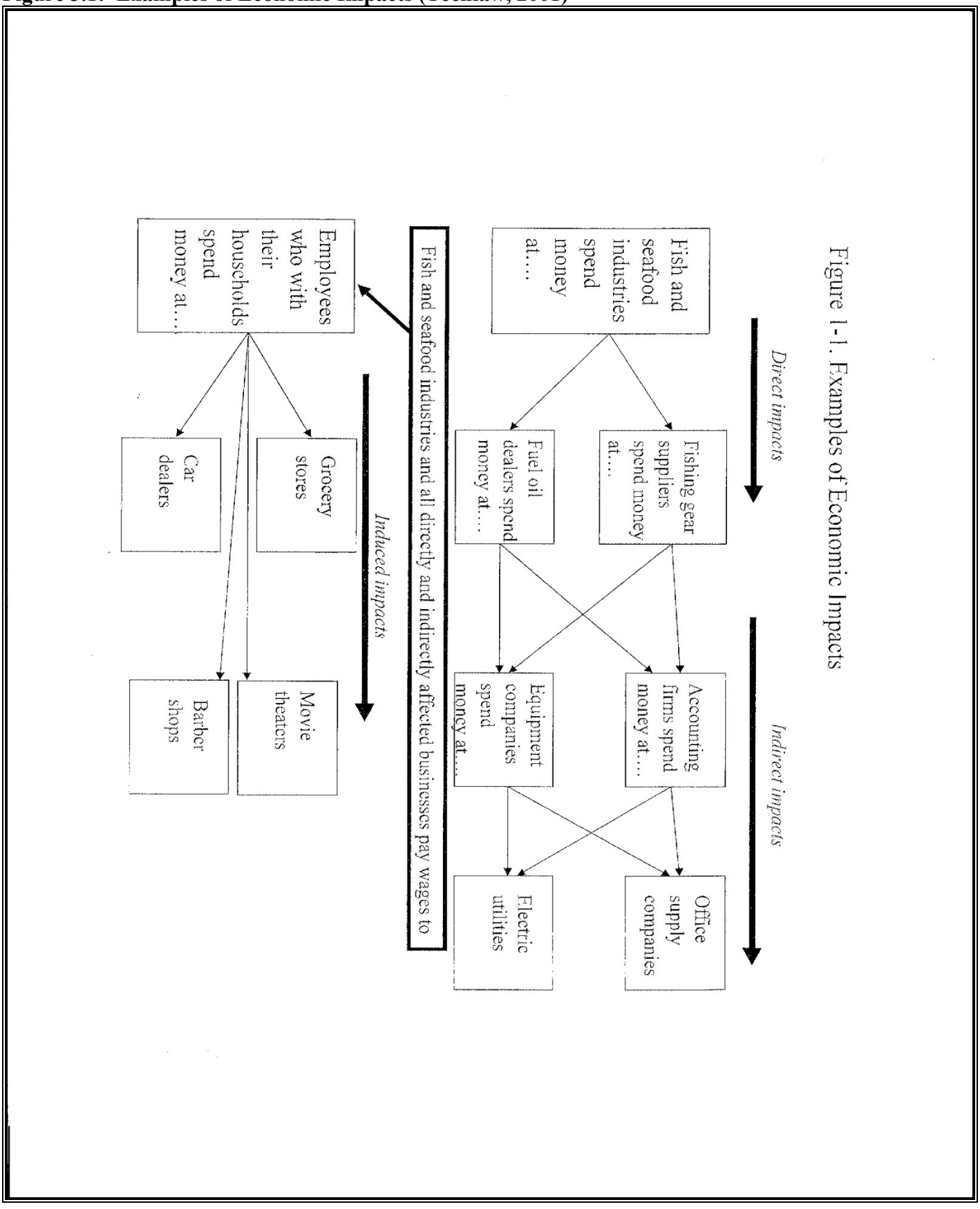
Value added businesses that distribute and process seafood, and the retail establishments that sell seafood are also part of the seafood industry in Rhode Island, and contribute significantly to the state's economy. Included in this portion of the industry is the seafood landed in other states by Rhode Island vessels, and seafood shipped into the state for processing/distribution.

Business expenditures by the individual entities within the seafood industry comprise the secondary level of contribution to the state's economy. For example, fishing vessels, seafood processors, and fish markets buy goods and services in order to operate. These include office supplies, accounting services, fishing gear, vessel services, equipment services, fuel, and a myriad of other goods and services. These expenditures, purchases made by commercial fishermen and seafood companies, in turn create commerce, jobs, and generate income for establishments supplying these goods and services. These economic contributions are labeled direct impacts. Direct impacts occur as commercial fishing and seafood industries spend money for goods and services supplied by other RI companies.

Establishments that deal directly with the commercial fishing and seafood industries will in turn need to purchase goods and services from other RI businesses as a result of the demands created by the commercial fishing and seafood industries. These are called indirect impacts. These indirect impacts continue to generate economic activity as the indirectly impacted firms continue to buy goods and services from other Rhode Island businesses, thus creating a rippling effect of dollars spent. These business establishments form a composite of the economic contributions from the states commercial fishing and seafood industries.

Added to this is spending in RI by workers whose wages are dependent on the commercial fishing and seafood industries, including crewmen, accountants, seafood processing labor, marine mechanics, utility workers, etc. Some or all of these workers' income are ultimately dependent on the commercial fishing and seafood industries. As these wages are spent on groceries, housing, and entertainment, new demands for goods and services are created for a wider range of RI businesses. These sales are in turn referred to as induced impact. A simple chart of these economic impacts is shown in Figure 3-1.

Figure 3.1: Examples of Economic Impacts (Techlaw, 2001)



The commercial fishing and seafood industry workers directly and indirectly impact businesses through their spent wages. As is true for any state economy, the circulation of spending in RI is not endless. Monies leave RI for purchases outside the state or for federal taxes and some monies are set aside for savings. As a result, the impact of industry dependent expenditures on the economy of RI reaches a limit.

Three separate but related NFMS reports were identified and can be used to quantitatively describe the most current economic contributions of the commercial fishing and seafood industries. These analyses include the most tangible available descriptions of the contribution of the commercial fishing and seafood industries' contribution to Rhode Island's economy. Parameters include: number of jobs and income, sales generated by industry sectors, and total dollar value of economic activity. The first analysis describes the economic contributions of seafood landed in Rhode Island in 2010.

The Economic Contribution of Seafood Landed in Rhode Island – Section 3.1

The economic contribution of seafood landings in Rhode Island extends well beyond simply measuring employment, income, and dockside sales of commercial harvesting businesses. Value-added businesses that distribute and process the landings and retail-level establishments that sell the seafood also contribute to the RI economy's employment and income base. Additionally, beyond the direct effects to businesses that sell seafood, indirect effects occur through backward linkages to non-fisheries sectors in RI. For example, RI seafood processors must purchase goods and services to maintain and operate their facilities, and businesses that provide these goods and services must in turn purchase inputs from their suppliers in order to conduct the transactions. This cascading series of industry-to-industry multiplier effects, and the cycle of consumption and spending induced by all the incomes generated from these economic activities contributes, to the economy's employment and income base and continues until all of the multiplier effects are derived from outside the state of RI (i.e. excludes imports).

An analytical framework known as regional input-output analysis can be used to measure multiplier effects and thus estimate the total contribution of RI seafood landings to the economy of RI. The input-output modeling approach provides a snapshot of the universe of linkages between the economic sectors of an economy.

In the assessment provided here, a Seafood Industry Input / Output Model developed by NMFS was used to estimate how seafood landed in RI contributes to the overall economy of RI.[1] The model is constructed from calendar year 2008 data. The estimated multiplier effects (sales, income, and employment) generated by $1.00 of commercial fishing ex-vessel revenue landed in RI in 2008 are shown in Table 3.1. Sales reflect total dollar sales in RI generated from the production of seafood by RI commercial harvesters, primary dealers/processors, secondary wholesalers, restaurants and grocers. Income represents wages, salaries, benefits, and proprietary income generated from the sale of seafood by five different types of seafood businesses shown in Table 3.1. Employment includes both full-time and part-time (including seasonal) workers supported by the production of seafood in Rhode Island and is expressed as total number of jobs.

[1] For a complete description of the model see https://www.st.nmfs.noaa.gov/pls/apex32/f?p=160:7:968055578636364::NO

Table 3.1: Multiplier Effects Per Dollar of Ex-vessel Revenue Landed in Rhode Island

	Sales ($'s)	Income ($'s)	Employment (jobs)
Harvesting	1.17	0.453	0.0000254
Primary Dealers/Processors	0.267	0.097	0.000003542
Secondary Wholesalers/Distributors	0.329	0.17	0.000004471
Restaurants	0.579	0.954	0.00004654
Grocers	0.145	0.087	0.000002294
Total	**2.49**	**1.761**	**0.00008225**

The economic contributions of Rhode Island landings to the overall economy of RI were estimated by multiplying the ex-vessel value of sales in 2010 by the multipliers shown in Table 3.1. Although the model's multipliers capture economic relationships that existed in 2008, the state of Rhode Island's economy remained relatively stable from 2008 through 2010 so the multipliers still likely represent 2010 economic conditions in RI. Northeast Dealer Weighout Data approximated the value of landings in RI at $60.4 million in 2010. Thus, when the multipliers were applied to the $60.4 million in ex-vessel revenue, the RI seafood industry generated a total of $150.3 million in sales to RI businesse, $106 million in income to workers, and supported over 4,968 jobs. (Table 3.2).

Table 3.2 Contribution of Rhode Island Landings to the State's Economy in 2010

	Sales ($'s)	Income ($'s)	Employment (jobs)
Harvesting	70,668,000	27,361,200	1,534
Primary Dealers/Processors	16,126,800	5,858,800	214
Secondary Wholesalers/Distributors	19,871,600	10,268,000	270
Restaurants	34,971,600	57,621,600	2,811
Grocers	8,758,000	5,254,800	139
Total	**150,396,000**	**106,364,400**	**4,968**

When compared across five seafood business categories as shown in Table 3.2., commercial harvesting businesses contributed the largest share of total sales impacts based on landings in RI ($70.6 million) while restaurants generated the highest level of income impacts ($57.6 million) and employment impacts (2,811 jobs) from local landings of seafood.

This estimate of economic contributions is based on landed values, i.e. the ex-vessel value of fish and shellfish landed at RI ports. These landing values are derived from a federally imposed dealer reporting system (SAFIS). Besides identifying the economic contributions described above, the model may also be useful in the future as a tool to monitor and predict fishery management impacts within geographic areas. An example of this type of application is presented below. It is an analysis of the economic contributions and regulatory impacts for the RI multispecies permitted vessels (Steinbaeck, 2009).

A Seafood Industry Input/Output Model developed by NMFS was used to estimate the potential short-term multiplier effects of reduced groundfish landings on shore-side businesses in RI.[2] The estimated multiplier

[2] For a complete description of the model see https://www.st.nmfs.noaa.gov/pls/apex32/f?p=160:7:968055578636364::NO

effects associated with $1 of commercial fishing ex-vessel revenue landed in RI in 2008 are shown in the subsequent table 3.3.

Table 3.3: Multiplier Effects Per Dollar of Ex-vessel Revenue Change in Rhode Island 2008

	Sales ($'s)	Income ($'s)	Employment (jobs)
Harvesting	1.17	0.453	0.0000254
Primary Dealers/Processors	0.267	0.097	0.000003542
Secondary Wholesalers/Distributors	0.329	0.17	0.000004471
Total	**1.766**	**0.72**	**0.000033413**

The multiplier effects are constructed from landings of all species, but are still likely representative of the multiplier effects associated with the groundfish industry. The short-term multiplier effects of reduced groundfish landings in RI on the overall economy of RI can be calculated by multiplying the estimated migration of ex-vessel revenue out of RI by the multipliers in the table 3.3. Harvesting, wholesaling, and processing multipliers for seafood landed in RI are provided. The effect of reduced landings of groundfish in RI on the retail sector in RI is likely to be minimal and is not estimated here.

The Rhode Island Groundfish Fishery Focus, which follows, outlines the effect of change from export of landings from the state from this analysis.

Rhode Island Groundfish Fishery Focus

According to calendar year 2009 Northeast Dealer Weighout data, the value of groundfish landed in RI approximated $1.727 million (includes cod, haddock, pollock, white hake, redfish, witch, plaice, yellowtail, winter and windowpane flounders). An additional $2.289 million in other species were landed on those same trips. Thus, the total value of species landed in RI on trips where groundfish were landed approximated $4.0 million in 2009. This equates to approximately 6% of the value of all species landed in RI in 2009 ($68.89 million). Nonetheless, if it is assumed that 35% of groundfish previously landed in RI is now leaving the state because of management induced distribution changes and that the associated value of the non-groundfish landings is also migrating out of the state, then approximately $1.4 million in annual ex-vessel revenue will have left the state in calendar year 2010.

According to multipliers contained in the model, a reduction of $1.4 million in annual ex-vessel revenue results in a total decline of $1.638 million in sales ($1.4 million x 1.17) to the RI economy. This includes a decline of $238 thousand in sales pertains to businesses that sell goods and services to the commercial fishing industry in Rhode Island. Additionally a total decline in income earned from fishing and from the chain of businesses that ultimately support the commercial harvesting industry is estimated to be $634,000 ($1.4 million x 0.453) and the total number of jobs (both full and part-time) estimated to be affected is 36 ($1.4 million x 0.0000254).

If it is also assumed that the $1.4 million in lost ex-vessel revenue will no longer be sold to wholesalers and processers operating out of Rhode Island, then additional short-term losses would occur. Losses to primary dealers/processors and secondary wholesalers/distributors and the resulting associated multiplier effects on their chain of suppliers can also be estimated from the table above. The $1.4 million in lost ex-vessel revenue is estimated to result in a total decline of $834,400 in sales to processors/wholesalers and to supporting businesses located in RI [($1.4 million * 0.267) + ($1.4 million x 0.329)]. The estimated decline in income to

processors/wholesalers and the businesses that support those industries is $373,800 [(1.4 million * 0.097) + ($1.4 million x 0.17)] and the total number of jobs (both full and part-time) estimated to be affected is 11 [(1.4 million * 0.000003542) + ($1.4 million x 0.000004471)].

The multiplier estimates can be summed across harvester, processors and dealers (without double-counting) to obtain the total short-term effect on the RI economy of a $1.4 million reduction in annual ex-vessel revenue. Thus, the total decline in sales to the RI economy is estimated to be $2.472 million ($1.4 million to harvesters and $1.072 million to processers/wholesalers and supporting businesses). The total decline in personal income is estimated to be $1.008 million to the Rhode Island economy and approximately 47 jobs (both full and part-time) are estimated to be affected.

The multiplier effects shown here should be considered upper bound projections due to several assumptions that were made in the assessment. First, it is assumed that all of the goods and services purchased by harvesting businesses that move their landings to ports outside of RI impact businesses located outside of Rhode Island. If those vessels continue to purchase inputs (e.g., fuel, gear, maintenance, etc.) in RI then the multiplier effects of reduced ex-vessel revenues would be lower than shown here. Secondly, it is assumed that the seafood landed in ports outside of RI will not be sold back to RI wholesalers and processors. Sales of seafood back to RI wholesalers and processors would reduce the multiplier losses shown here. Lastly, the input-output modeling approach is static and does not allow for price changes or substitution. If ex-vessel seafood prices in RI increase due to lower supplies or RI wholesalers and processors are able to offset reductions in local supply with imports or substitute species, then the multiplier effects of reductions in ex-vessel revenues would likely be lower than the shown here. Changes of this kind will certainly occur in the long-term.

This same model was used to estimate the economic contribution of selected high value species landed in RI (Table 3.4). The analysis is useful to both monitor and understand the economic significance of individual fisheries but further illustrates the capability of this monitoring tool. As a practical matter, these estimates need to be proofed; i.e., undergo a ground-truth process comparison with empirical evidence and data with RI 2010 species landings.

TABLE 3.4: Economic Contributions to Rhode Island from the American Lobster, Loligo Squid and Summer Flounder Commercial Fisheries 2010

American Lobster

2010 landings dollar value = $12,394,242.00

	SALES ($)	INCOME ($)	(EMPLOYMENT JOBS)
Harvesting	14,501,263.14	5,614,591.63	314.8
Primary Dealer/Processor	3,309,262.61	1,202,241.47	43.9
Secondary Wholesalers/Distributors	4,077,705.62	2,107,021.14	55.4
Restaurants	7,176,266.12	11,824,106.86	576.8
Grocers	1,797,165.09	1,078,299.05	28.4
Total	**30,861,662.58**	**21,826,260.15**	**1019.3**

Loligo Squid

2010 landings dollar value =$7,512,831.00

	SALES ($)	INCOME ($)	EMPLOYMENT (JOBS)
Harvesting	8,790,012.27	3,403,312.44	190.8
Primary Dealer/Processor	2,005,925.88	728,744.61	26.6
Secondary Wholesalers/Distributors	2,471,721.40	1,277,181.27	33.6
Restaurants	4,349,929.15	7,167,240.77	349.6
Grocers	1,089,360.50	653,616..30	17.2
Total	**18,706,949.20**	**12,576,479.09**	**617.8**

Summer Flounder

2010 landings dollar value = $5,560,038.00

	SALES ($)	INCOME ($)	EMPLOYMENT (JOBS)
Harvesting	6,505,244.46	2,518,697.21	141.2
Primary Dealer/Processor	1,484,530.15	539,323.69	19.7
Secondary Wholesalers/Distributors	1,829,252.50	949,206.46	24.9
Restaurants	3,219,262.00	5,304,276.25	258.8
Grocers	806,205.51	483,723.31	12.8
Total	**13,038,289.11**	**9,795,226.92**	**457.4**

Economics of Rhode Island 2009 – Section 3.2

The second assessment is reported in the NOAA Office of Science and Technology report *Fisheries Economics of the United States, 2009* (NMFS 2011). Seafood industry impacts described use an input/output model designed to estimate economic impacts for fishery products as they work their way through the entire economy from harvesting to consumer. The model provides estimates of each of the following components of the seafood industry: 1) commercial fishermen, 2) primary dealers and processors, 3) secondary seafood wholesalers and distributors, 4) retailers and 5) restaurants. The economic impacts of the last four groups are primarily for domestically landed fish and imported fish. Included in this estimate are some imported fish and other seafood products entering into the state to represent a broader consumption factor and related economic contribution not captured in the first estimate described, which is tied solely to RI landings.

NMFS Fisheries Economics of the United States 2009, made available in June 2011 is the most recent fisheries economic report in this series and contains slightly different economic impacts of the economic contribution of seafood landed in Rhode Island as described above. The full report covers a ten year period (2000 – 2009) assessing a range of factors including RI totals pounds landed and dollar value of landings, key species, and average annual prices for key species. The data points include the same dealer report generated inputs used in previous estimates. Additionally, seafood imports and per capita domestic seafood consumption is factored in the 2009 economic impacts of the RI seafood industry.

Table 3.5: 2009 Economic Impacts of the Rhode Island Seafood Industry (thousands of dollars)

	Jobs	Sales	Income	Value Added
Total Impacts	7,888	$905,714	$219,489	$347,570
Commercial Harvesters	1,664	106,208	31,603	49,609
Seafood Processors & Dealers	393	41,186	15,960	20,740
Importers	2,044	562,327	90,124	171,422
Seafood Wholesalers & Distributors	429	51,853	18,373	24,175
Retail	3,357	144,139	63,429	81,624

Source: Fisheries Economics of the United States 2009

Note: Neither of these analysis accounts for landings of Rhode Island fishing vessels outside of the state of RI or fish shipped into the state for processing. These contributions are not included in the economic impact estimates reported, they were earlier described in sections related to fisheries landings and processing capacity.

Economic Trends – Section 3.3

The third analysis describes recent economic trends related to the state's seafood industry, as reported under the broader context of marine industry trends. An update on the published report through the year 2008 was provided (E. Thunberg, personal communication, May 2011).

According to this study, the number of establishments involved in seafood commerce was 99 in 2005 and declined to 93 in 2008. Seafood commerce includes commercial fishing, seafood dealers, seafood processors and retail seafood markets. The number of employees in these establishments was 714 in 2005 and 651 in 2008 (See Table 3.6).

Table 3.6: Total Number of Seafood Establishments and Employees 2005-2008 (Thunberg 2011).

Year	# of Establishments	# of Employees
2005	99	714
2006	102	646
2007	99	602
2008	93	651

Raw Data Sources: County Business Partners (BR 2005-2010 non-employer state U.S. Census Bureau, Employment Data Bureau of Statistics).

The above data sources account for primary activity only and do not capture self-employed individuals. Based on underlying metrics and limitations of data inputs, the report under estimates seafood commerce activity, as compared to the preceding analysis reported. The one common, consistent thread is the decline in metrics that have been used to access economic activity and contributions.

For those interested the study includes comparative trend analysis of marine trades including the seafood industry for the Northeast states.

In summary, the three estimates of economic impacts used different methods to measure and describe the economic contributions of the Rhode Island commercial fishing industry to statewide employment, income and generated sales. Further, the most current information for each is important to present a baseline profile description. It is possible to study each separately for specific quantitative analysis while at the same time, gaining a broader, collective perspective and recognizing the inherent differences in the data input used for each analysis.

Accurately assessing the economic contributions of the state's commercial fishing industry is difficult for a variety of reasons including missing information regarding the landings of Rhode Island home-ported vessels that occur in other states; and the landings in Rhode Island by out of state vessels. Additionally, fish shipped into the state for processing/distribution are not counted. Additionally, because many fishermen are self-employed, they are not factually represented in reported employment levels. Due to the fact that these contributions are not fully represented in economic studies, the estimates of economic contributions described vary by study.

Moving forward, it will be important to develop a comprehensive approach (model) to systematically capture economic contributions of the state's commercial fishing industry. The first analysis presented, while dependent on state fishery landings and inherently limited because of this fact, has certain advantages that could be used in the future to develop a more comprehensive economic contribution profile. The principle reasons for this are: 1) the model is designed to be user-friendly and can be completed on a timely basis requiring only annualized data inputs; and 2) if it is possible to identify and include the specific missing quantitative data noted above, the results would effectively produce a more comprehensive analysis. The assumptions necessary to provide a more inclusive economic contribution estimate are similar to those used in the existing model. The fact that much of the information used in these types of analyses is subject to variability should not stand in the way of using these reports to inform decisions that would otherwise be made without the benefit of the prospective they provide.

Comprehensive Estimate of Commercial Fishing Contributions to the Rhode Island Economy – Section 3.4

Following is a comprehensive estimate of commercial fisheries contributions to the RI economy. The estimate was developed using the econometric models previously identified in section 3.1 and modified to include other known data inputs: Additional data includes all RI vessel landings, including landings by RI home ported vessels in other states, and an estimate of fish shipped into RI for processing and distribution including a value for imported product that directly contributes to shore-side businesses that supply seafood consumption. These contributions are significant and can be justified as a more realistic estimate in the absence of totally quantified data.

The estimate of total value of sales of fish in RI is $200.9 million. The estimate used here includes; the Ex-vessel value of fish and shellfish landed at RI ports, a value of landings by RI vessels in other states of $10 million, a value of landings in RI by out of state vessels of $4 million, and a value of fish shipped to RI for processing of 44 million pounds worth about $30 million. The resultant model generated estimate of total income associated with fish landed by RI home ported vessels as $149.9 million. The estimate of total employment in RI connected directly to harvesting, processing, distributing, and selling fish landed by RI home ported vessels is 6,951. These estimates do not include the sales associated with fish imports, which total approximately $562.3 million.

Table 3.7: 2010 Comprehensive Estimate of Commercial Fishing Contributions to the Rhode Island Economy

	Sales ($'s)	Income ($'s)	Employment (jobs)
Harvesting	81,666,000	31,619,000	1,773
Primary Dealers/Processors	24,136,800	8,768,800	320
Secondary Wholesalers/Distributors	29,741,600	15,368,000	404
Restaurants	52,341,600	86,241,600	4,207
Grocers	13,108,000	7,864,800	207
Importers	562,327,000	90,124,000	2,044
Total	**763,321,000**	**239,986,200**	**8,995**

Economic Contribution Note:
A previous, the widely used economic model developed in "The Economic Impact of Commercial Fishing on the State of Rhode Island, 1975," by Callaghan et al. (1975), identified the overall multiplier for Rhode Island's fishing industry as 424. This means that for every $100 of fish landed in the state, $424 worth of economic activity is stimulated. For fish landed in the state of RI ($60 million) and including data inputs for fish shipped into RI for processing ($30 million) and fish landed by RI home ported vessels in other states ($10 million) would result in a total RI commercial fish landing value of approximately $100 million. Thus the economic activity using this model, adjusted as noted, would result in $424 million of economic contributions to the RI economy.

Foreign Trade Seafood Impacts to Rhode Island Economy – Section 3.5

A quantified direct tracking estimate of the economic contributions of seafood exports and imports within the state is difficult to ascertain. There is no readily available data directly tracking RI seafood exports and imports.

Therefore, the number of RI firms involved in exporting and importing, species involved, quantities, and sources of those fish is not known other than by the involved businesses. Fisheries of the United States (NMFS) annually report seafood exports and imports nationally and by region but not by state. The transport modes of imports and exports include land, sea, and air. There are no recorded seafood exports or imports in 2010 from the port of Providence (NMFS, 2011). A 2001 study by Hall-Arber et al. reported 16% of fishery exports from the East Coast came from Rhode Island. Principal among the products exported were frozen at-sea squid (Illex & Loligo), butterfish, mackerel, and herring (Hall-Arber et al 2001). Unfortunately, no supporting quantified data or information sources were provided. As a beginning to identifying Rhode Island seafood foreign trade impacts, selected high-volume seafood dealers and processors were asked to identify 2010 key species. The main species exported included squid (Illex), mackerel, and herring. Rhode Island landed (frozen at-sea) species are the primary source of exported dealer processor product. Six of the eighteen companies surveyed indicated that they had export sales ranging from 5% - 50% of their total sales volume actual dollar amounts were not provided (Source: CCE-RI survey). The amount of products directly imported by Rhode Island firms is less quantified, but is occurring (G. Monson, personal communication, March 3, 2011). The main imported species include: butterfish, squid, mackerel, and American lobster.

Seafood imports are arriving from secondary sources such as, regional seafood distributors, and are intended for retail and food service point-of-sale. The commercial fishermen and dealer/processors interviewed raised concern over the impact that imported seafood has had on dockside prices, which, in their view, was causing or contributing to price stagnation. In their claim, they note that imported fish have few restrictions for proper labeling, which fosters substitution of cheaper imported, unspecified species for high-value domestic fish are subject to an absence of quality standards, and are landed with foreign fishing subsidies that fishermen here have to contend with. Directed research on the effects of imported seafood - 84% of U.S. seafood consumption in 2009 was imported - on the prices of locally caught seafood from fishermen to consumers is needed. For the record, more precise current information on Rhode Island exports and imports is available from the Port Import/Export Reporting Service (PIERS), a fee for service reporting agency. [Profile Note: A price quote for 2010 Rhode Island Import/Export was submitted to PIERS (May 2011) and will be forwarded when received for further action.]

Seafood Marketing –Section 3.6

U.S. imports of edible seafood made up 84% of the total U.S. consumption in 2009, up from 68% in 2000. Seafood imports are expected to continue trending upward thus supplementing and competing with domestic supply. Frozen seafood is estimated to represent over 50% of overall seafood consumption.

The types of seafood sold and amount of per capita consumption within the state is not known. There was a slight downward dip in overall US consumption in 2009 from 2007 (16.4 lbs per person to 16 lbs per person), and it is assumed that this was mostly a function of the national economic climate. Once the economy stabilizes, overall seafood consumption is expected to increase going forward. It is likely that Rhode Island per capita consumption is higher than the national average, because of proximity and availability of locally caught fish and shellfish. The source of fish sold and consumed in Rhode Island, including domestically supplied species and locally caught fish, as well as imported seafood, are not tracked.

The recent hearings conducted by the RI Senate Taskforce on Fisheries (2011) both recognized and addressed special state seafood marketing issues. The Task Force, chaired by RI Senator V. Susan Sosnowski (D-District 37, South Kingston, New Shoreham), held six hearings on a variety of issues including: understanding how in-state seafood products are marketed and distributed; identified ways to increase opportunities for more local seafood to be available to Rhode Island consumers; and discovering opportunities to increase Rhode Island

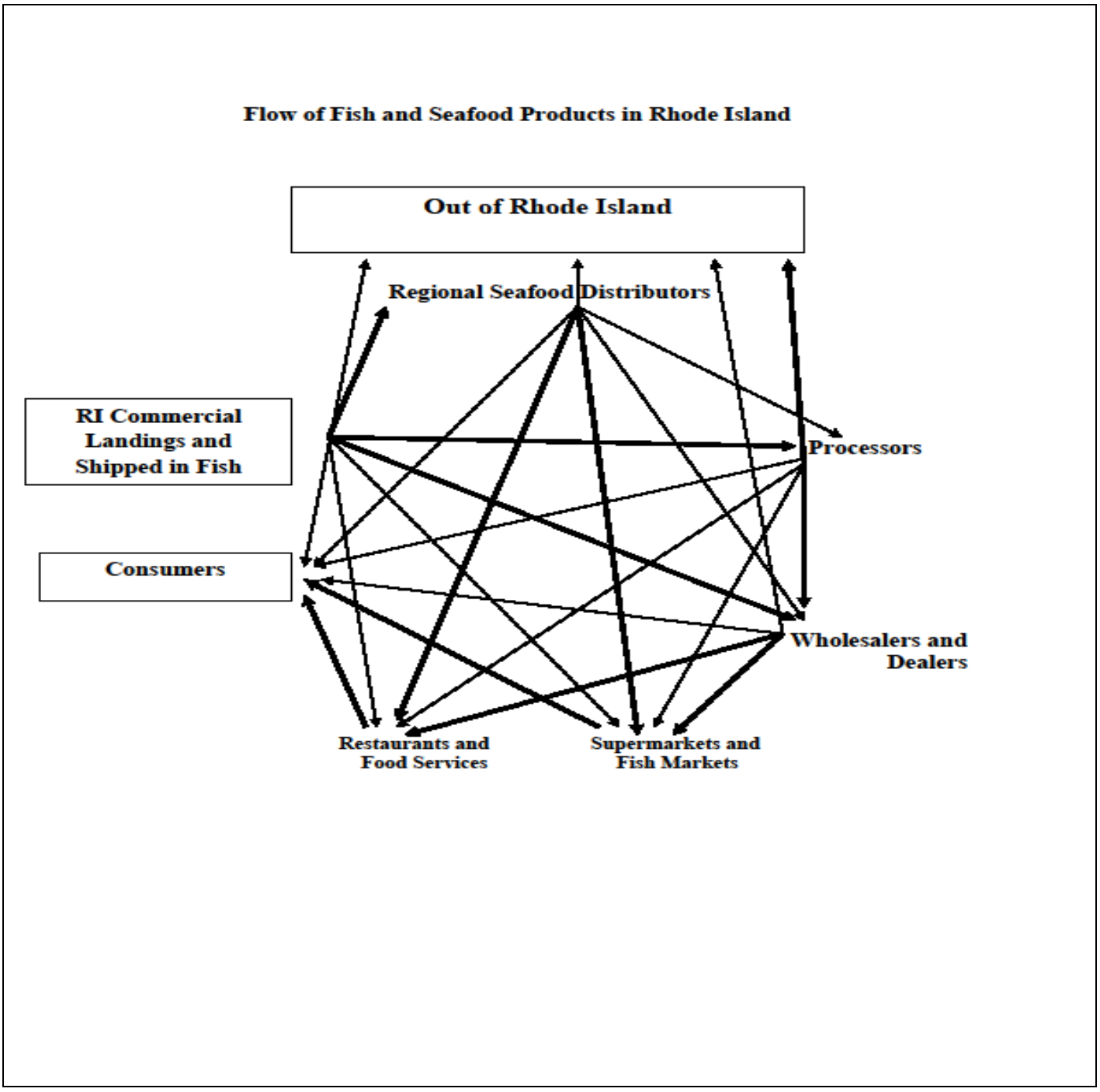
consumer demand for local seafood products. Additionally, a discussion was held about the creation of a Rhode Island seafood marketing collaborative. Important task force findings and actions relative to these issues were:

> Rhode Island seafood products face constant domestic competition from imported seafood products, with more than eighty percent of total U.S. seafood consumption imported.
> Action: April 14, 2011- Introduction and passage of Senate Resolution 850 urging Congress to pass Legislation supporting adequate funding for effective and sustained domestic marketing of United States seafood. There is not a federally funded national seafood fund available for the domestic marketing of United States seafood.
> Action: April 14, 2011- Introduction and passage of Senate Resolution 850 urging Congress to adequate funding for effective and sustained domestic marketing of United States seafood. The lack of resources and materials to support consumer seafood education programs results in consumers being unaware of locally caught fresh fish products.
> Action: June 8, 2011- Introduction of Senate Bill 997 to establish a Rhode Island seafood marketing collaborative to convene key stakeholders and address regulatory and marketing issues in and around local seafood. The lack of a Rhode Island Interagency and stakeholder coordinated seafood marketing collaborative is crucial to a successful marketing campaign in the state.
> Action: Same as above Senate Bill 997. A related recommendation was to identify legislative priorities resulting from the Rhode Island seafood marketing collaborative for the promotion of locally caught seafood, funding and state wide future marketing opportunities. (State of Rhode Island Special Task Force on Fisheries, 2011).

Assessing the market potential for "local" seafood in Rhode Island, Grimley and Roheim (2010), provide a marketing framework for a successful Rhode Island "local" seafood initiative. The survey findings reported from this study show that of the 200 respondents, 63.50% prefer to purchase seafood at independent seafood markets. Conventional supermarkets received the next largest response (45.5%). Consumers were asked how often they purchased a variety of seafood species. "White fish" an inclusive grouping of species with similar taste and apparent characteristics (ex. cod, haddock, flounder) received the highest ranking for preference and purchase frequency. The average response from 186 participants indicates they purchased (white fish) between once every two weeks and once per month. In summary, the study findings underline the strong potential to increase Rhode Island consumption of locally caught fish based on consumer preference and perceptions expressed. The study focused on the potential for expanding local catch consumption through existing farmer markets. The same potential may exist through traditional venues (ex. Fish Markets) through the implementation of promotional/education program (ex. "Get Fresh, Buy Local" campaign developed by USDA and RI Division of Agriculture for locally grown crops) expounding the benefits of locally sourced fish and shellfish. Additionally, commercial fishermen may be able to directly market catch through Community Sustainable Fishery (CSF) programs which involves individual and group participation in purchasing fish directly from Commercial Fishermen on subscription basis. There are several CSFs operating nationally; one program in Boston involves over a hundred participants. (Source: CSF Network)

Rhode Island's seafood industry relies on fish and shellfish landed in the state and fish landed elsewhere and fishery products landed elsewhere. Out of state products include fish and shellfish shipped here (sourced) from out-of-state dealers and fishermen who add value to these purchased fish and then sell them to Rhode Island customers. These customers may be other distribution businesses or retail outlets directly linked to consumption. The actual movement or product flow of the seafood is difficult to factually quantify because much of the underlying data is not tracked. Certain paths for fish entering the state are known, such as state landings and seafood inputs. However, fish movement into, within, and out of RI is generally not known. Neither are the locations and types of customers or product forms sold. In the absence of factual references, data based on dealer/processor interviews was used to construct a hypothetical flow chart of the fishery products for the state (see Figure 3.2).

Figure 3.2



Heavier lines indicate the most likely input and out flow for each segment. Based on the dealer/processor survey a centralized large full service/ product distribution outlet was not identified. An added contributing factor "regional seafood distribution" has been included to help explain how imported and other seafood's maybe entering the broader chain within the state. This type of entity would service supermarkets, restaurant chains and food service establishment. Profile reviewers are encouraged to review the flow distribution chart and may come to different assumptions to those presented, your comments and suggestion will be used to more accurately portrait these functions. If quantified depiction of this information is seen as valuable then a detailed study will need to be pursued.

Commercial Fishing Industry State Tax Revenue Impacts – Section 3.7

The RI Division of Taxation Department of Revenue reports that tax revenue by industry sectors is not tracked. The Office of Tax Revenue analysis stated that the existing IT system records gross revenue tax revenues only. In working with a state tax revenue analyst, an estimate of the commercial fishing industry (commercial fishing, seafood processing, seafood dealers/wholesalers and retailing) was developed using known data estimates, which are described in the preceding economic contribution section. These inputs include employment, personal income and sales generated. An estimate of state income tax revenue resulting from these inputs shows that the commercial fishing industry would equal less than 1 % of the state tax revenue, with the total state income tax revenue generated in 2010 being about $960 million. The analysis noted that while commercial fishing industry tax income is important, it is not a significant income tax source of revenue. As already noted, the employment, income and sales economic inputs are only estimates and likely significantly under report the actual related economic activity from the commercial fishing industry within RI. Thus, the tax revenue estimate is also low.

Commercial fishermen are exempt from RI state sales and use taxes. According to the Sales and Use Tax Office, commercial fishermen are refunded exempted sales and use taxes paid, but the data is not aggregated by specific industry payments. If this data were available, expenditures associated with commercial fishing or other seafood industry components, whether exempted or not, could be used to identify some cost and tax revenues as well.

Section Endnotes – Section 3.8

- Estimate of total value of sales of fish in RI is $200.9 million. [Note: This includes sales associated with fish landed by RI home ported vessels, and transactions for primary dealers/processors, secondary wholesalers/distributors, restaurants, and grocers. This figure does not include the sales associated with fish imports, which total approximately $562.3 million.]
- Estimate of total employment in RI connected directly to harvesting, processing, distributing, and selling fish landed by RI home ported vessels is 6,951.
- Estimate of total income associated with fish landed by RI home ported vessels is $149.9 million
- 72% of those surveyed welcomed the idea of a RI seafood marketing initiative.
- The economic contributions and impacts of the seafood industry to the overall economy of Rhode Island extend beyond the simple measurement of income and employment generated from the dockside sales of commercially harvested fish and shellfish.
- The total value of species landed in RI on trips where groundfish were landed approximated $4.0 million in 2009. This equates to approximately 6% of the value of all species landed in RI in 2009 ($68.89 million).
- Moving forward, it will be important to develop a comprehensive approach (model) to systematically capture economic contributions of the state's commercial fishing industry.
- There is no readily available data directly tracking RI seafood exports and imports.
- The transport modes of imports and exports include land, sea, and air (CCE interviews).
- There are no recorded seafood exports or imports in 2010 from the port of Providence.
- The main species exported included squid (Illex), mackerel, and herring. The main imported species include: butterfish, squid, mackerel, and American lobster.
- Directed research on the effects of imported seafood - 84% of U.S. seafood consumption in 2009 was imported - on the prices of locally caught seafood from fishermen to consumers is needed.
- U.S. imports of edible seafood made up 84% of the total U.S. consumption in 2009, up from 68% in 2000. Seafood imports are expected to continue trending upward thus supplementing and competing with domestic supply.
- The types of seafood sold and amount of per capita consumption within the state is not known. There was a slight downward dip in overall US consumption in 2009 from 2007 (16.4 lbs per person to 16 lbs per person).
- The source of fish sold and consumed in Rhode Island, including domestically supplied species and locally caught fish, as well as imported seafood, are not tracked.
- Introduction of Senate Bill 997 to establish a Rhode Island seafood marketing collaborative to convene key stakeholders and address regulatory and marketing issues in and around local seafood.

CHAPTER 4

Geographic Profile Introduction – Section 4.0

"Coastal life in the northeast is facing rapid social and economic change. Those engaged in fishing-related activities are leaving waterfront areas that they have traditionally occupied to make way for tourism development and second home markets, often in response to rising property values. Tighter fishing regulations, higher fuel prices and declining stocks have also transformed the structure of the fishing industry.

Just as individuals respond differently to social changes, so do communities and sub-populations. For some, rapid change stimulates innovation and cooperation while others are more vulnerable to the negative impacts of change. In other words, some communities and groups may be more resilient to change or vulnerable to impacts than others. Understanding how communities and groups respond can help inform the creation of marine resource management policies that are more socially sustainable (Source: Excerpt Human Communities NEFSC SSB)."

This statement is about the potential present day impacts and factors that can affect commercial fishing communities and is insightful on many levels. The first concern is that many northeast commercial fishing communities have already been negatively impacted in the ways described including some in Rhode Island. Secondly, the statement seems to imply that fishing community vulnerability is more about the ability to adapt to change, as opposed to the reality that some changes have negative impacts that are unavoidable. Lastly, the changes from the pressures described above which are mainly regulatory, inherently create winners and losers on an individual and community basis. Commercial fishing dependent communities are now and in the future under pressures that threaten their viability. Fishery managers and other decision makers as well as those organizations that watch guard fishing interest will need to anticipate these impacts and at least become aware of the potential unintended consequences of actions taken.

Where Fishing Occurs – Section 4.1

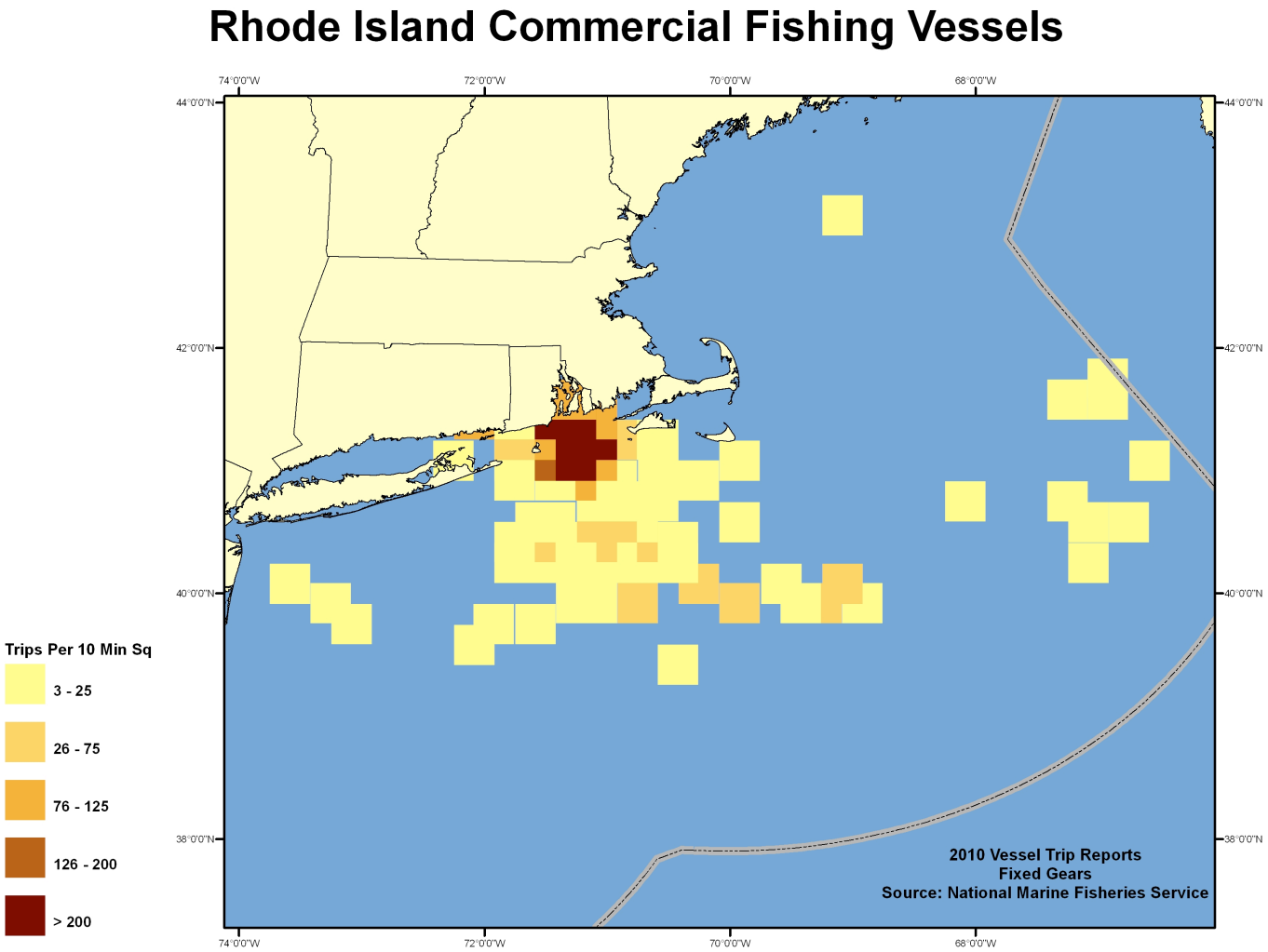
Rhode Island commercial fishermen fish the waters of Narragansett Bay and the Atlantic Ocean offshore of the state's forty mile coastline to the East and North to the Hague line and south to the Mid Atlantic Canyons of the Northeast Atlantic.

As a way of monitoring where fishing activity occurs, the NMFS requires commercial fishermen operating federally permitted vessels to submit one vessel trip report (VTR) for each fishing trip except for RI state permitted lobstermen only. Inactive vessels are required to submit one VTR per month indicating no fishing activity. RIDEM mandates that state licensed fishermen without federal permits to submit one state Catch and Effort Report for each gear type and trip conducted. On each VTR the fishermen reports the location of the trip as one set of coordinates (Latitude/Longitude or Loran) and statistical area fished. The Latitude/Longitude or Loran is not recorded on the state Catch and Effort Report. VTR information is only an approximation of where fishing activity occurs, because fishermen self-report only one set of coordinates for each trip. In fact, any one trip will likely include multiple tows/gear retrieval that can take place in many locations. Tracking where and when fishing activity occurs can provide a framework of understanding fishing effort and fishermen action. Fishing locations are obviously influenced by fishing gear type and where to find targeted species; but effort is

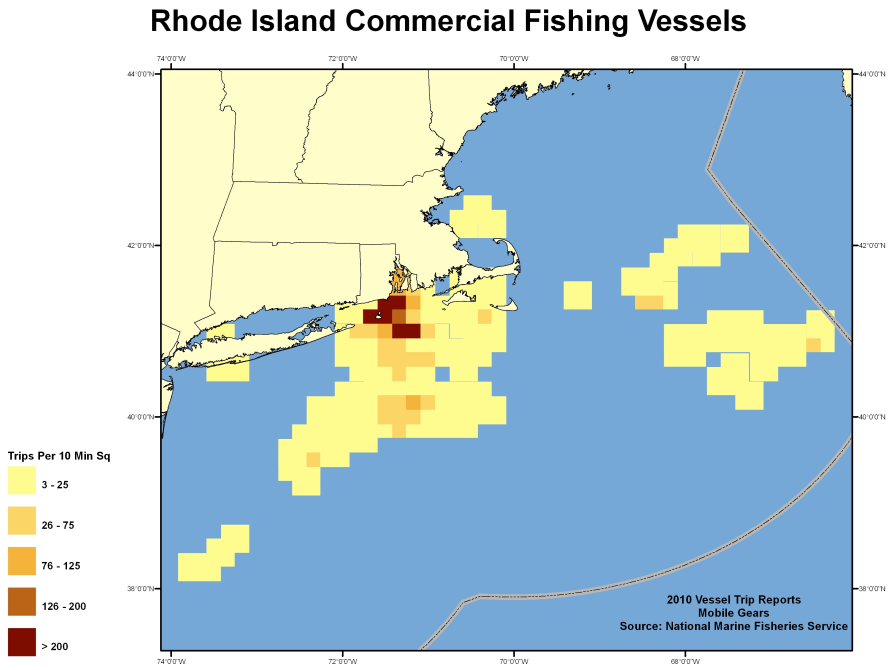
also differentiated by port proximately to fishing ground, vessel size, area closures, gear conflicts, regulatory restrictions and economic conditions.

The GIS maps below describe where fishing occurred in 2010 for federally permitted RI home-ported vessels. The information presented was derived from federal VTRs, in ten minute squares (approx. 10 nautical miles x 10 nautical miles), grouped by mobile, fixed and other gear types, and color coded by trip frequency for the three gear categories. Mobile gear types include otter trawls (bottom, mid-water and pair trawls), dredges (scallops, surf clams and ocean quahogs), purse seines and handlines (hook & line). Fixed gear types include gillnets (sink), pound traps, floating traps, pots and longlines. Other gear types is a classification for fishing effort related to unclassified/unidentified gear. The VTR information used is self-reported and while ten-minute squares are more definitive than larger statistical areas, what is shown is an approximation of the fishing intensity and where the actual fishing occurred. The information regarding where fishing occurs is useful in informing discussions about broader ocean usage impacts on commercial fishing activities. Going forward, mapping pattern changes in where fishing by gear type occurs may help to better understand the direct and indirect impacts of fishery regulations and other factors that affect commercial fishing activity.

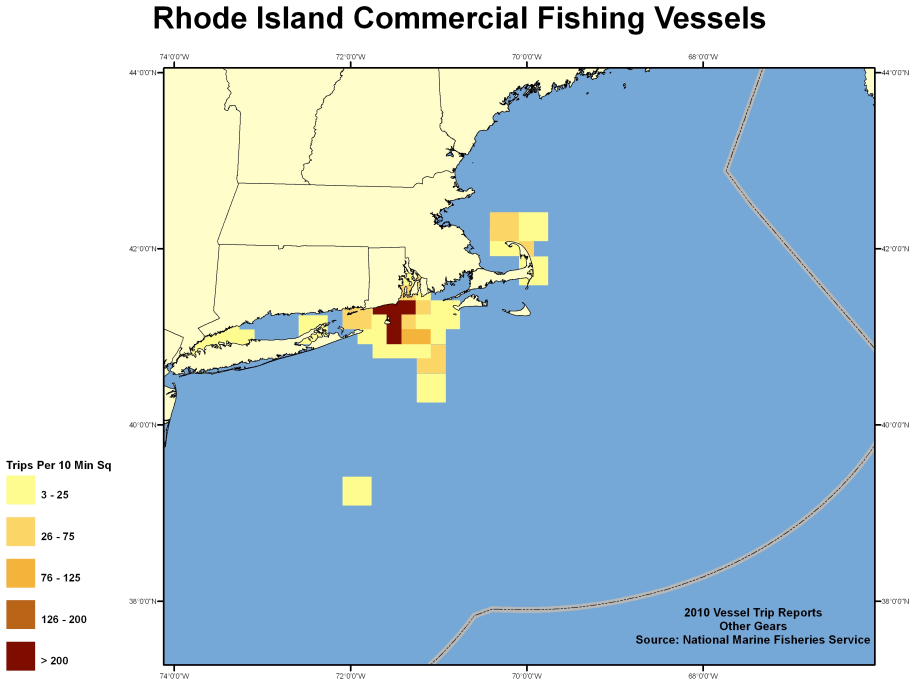
Maps provided by Joan Palmer Chief, Data Management Systems, NEFSC.



GIS Map 4.1 Federally permitted RI home-ported vessels fixed gear trips for 2010



GIS Map 4.2 Federally permitted RI home-ported vessels mobile gear trips for 2010



GIS Map 4.3 Federally permitted RI home-ported vessels other gear trips for 2010

Table 4.1 describes the number of trips and fishing hours for gear by areas fished in 2010 of where fishing occurred which was developed from a statistical area breakdown by total trip and number of hours the gear was fished (source: Daniel Costa RIDEM VTR and Catch & Effort Logbook data). In 2010, RI commercial fishermen (not including shellfishermen) completed 32,019 fishing trips fishing their gear for 3,010,008 hours. In statistical area 537 (see chart on next page) fishermen fished the highest number of total trips (25,845) and fished gear the highest number of hours (2,141,628) reported. See page 77 for chart area fishing locations.

Table:4.1 Number of Trips & Fishing Hours of Gear Used by Area in 2010

Area Code	Number of Trips	Number of Hours Gear Fished
539	25,845	2,141,628
537	2,146	477,117
611	903	50,861
121	818	18,732
132	408	36,669
127	384	34,516
616	364	60,623
525	152	34,848
613	134	23,094
134	122	13,206
538	76	5,334
526	73	34,977
622	71	556
149	70	405
522	67	13,634
515	60	25,494
615	40	441
562	35	4,037
561	31	10,892
623	27	10,404
612	25	163
569	24	119
626	19	145
534	14	1,865
632	13	87
108	8	
532	7	995
139	6	1,104
514	6	16
531	5	90
535	5	393
122	4	13
137	4	2,018
513	4	308
571	4	2,211
146	3	19
165	2	20
167	2	17
521	2	16
529	2	240
536	2	340
639	2	5
62	1	10
85	1	
92	1	1
109	1	10
124	1	504
162	1	15
168	1	
172	1	18
239	1	6
359	1	
439	1	2
453	1	960
512	1	18
516	1	18
517	1	168
519	1	100
530	1	7
543	1	6
552	1	14
564	1	6
610	1	16
618	1	2
621	1	8
625	1	2
627	1	6
633	1	16
636	1	3
637	1	384
643	1	48
999	1	8
Total	**32,019**	**3,010,008**

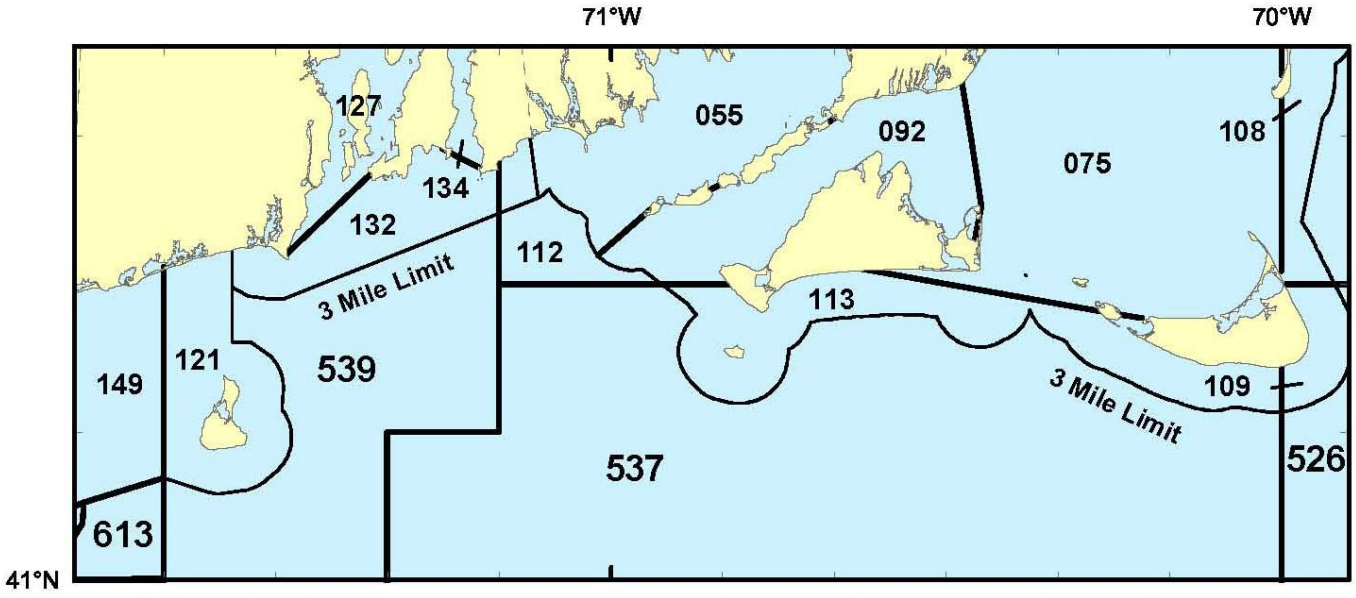


Chart 6. Rhode Island Sound, Cape Cod and Islands NEMFIS Area Codes

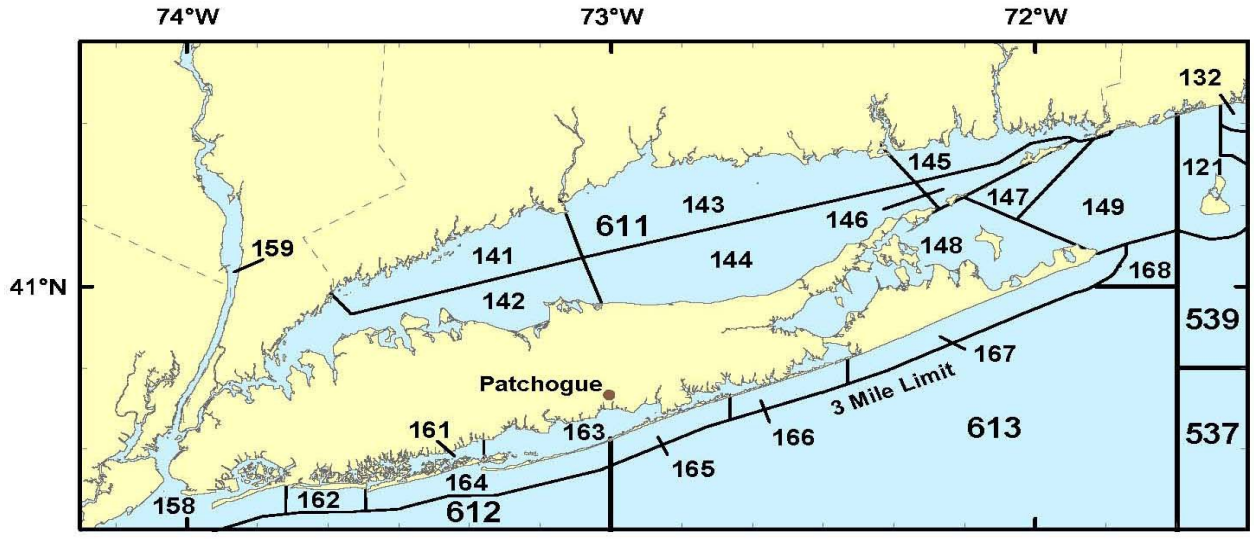
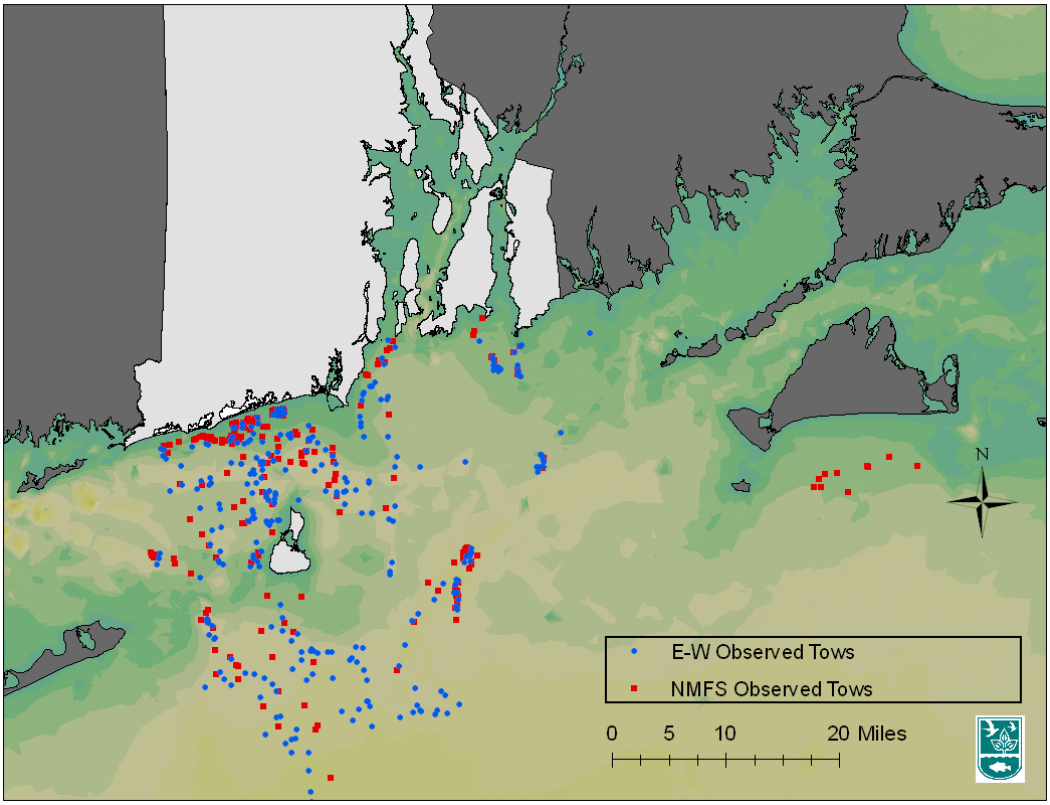


Chart 7. Long Island Sound and New York NEMFIS Area Codes

The GIS map below identifies 2009 fluke sector participants fishing locations based on E-W and NMFS observed tows. This information is presented to illuminate where fishing occurs for a species directed fishery.

GIS Map 4.4 Indicating position of observed trips from the Fluke Sector participants in 2009.



(RIDEM 2010) Final Report on the 2009 Sector Allocation Pilot Program: RI Division of Fish and Wildlife

Rhode Island Shore-side Infrastructure Capacity to Support Commercial Fisheries - Section 4.2

The shore-side infrastructure, which supports and facilitates commercial fisheries activity within the state is for the most part, port and area specific. However, there exist essential generic support functions, which provide statewide coverage. Collectively, the state's infrastructure serves the commercial fishing industry well, providing a full array of necessary services supporting not only Rhode Island's own industry but other parts of the industry in the region as well. Rhode Island is recognized as a regional service destination for commercial fishing vessels from Southern New England and Long Island, NY. (Source: interviews with RI Commercial Fisheries Trade/Service Industries; Ocean Marine Insurance, Rhode Island Engine, Promet Shipyard, Pt. Judith Electronics, Trawlworks and Superior Trawl.) Increased demand from transient vessels for essential services is in part due to the well-earned reputations of the above named entities but also because of the loss of similar services in the smaller ports from which these outside vessels homeport. According to NEFSC/SSB staff, many small ports in the Northeast are under greater pressure to maintain viable commercial fishing support services and function. (Personal communications: A. Kitts, L. Colburn, P. Clay). Smaller commercial port contraction is an observed phenomenon with common root causes primarily stemming from fishery regulation impacts and resulting economic pressures. The effect has been in many areas a reduction in landings, fishing effort, number of active vessels, and commercial fishermen. This trend line has negatively affected the primary commercial fishing support/service industries in highly impacted ports, resulting in the disappearance of service infrastructure (For example, the failure of the Portland Fish Exchange in Portland, ME and the failure of two pack out facilities and under utilization of the public commercial fishing dock in Shinnecock, NY).

An overview and inventory of statewide infrastructure follows in Table 4.2. The information is organized by port/town, with essential components of commercial fishing industry infrastructure. Infrastructure components are categorized for each port/fishing community and can be individually viewed at this junction to determine overall localized infrastructure status. When considered as a whole, the inventory provides a current composite summary of Rhode Island's shore-side commercial fishing industry public and private infrastructure.

Table 4.2: Rhode Island Commercial Fishing Industry Infrastructure

(A Current Inventory of Statewide Assets, Facilities, and Infrastructure Supporting Commercial Fishing)

Data/Information sources used were RIDEM (RI Seafood/Dealer list), RI Ports and Commercial Harbors 2010, Point Judith and Newport fact sheets (RIDEM), personal communications (Robert Carpenter, Larry Mouradjian and Terri Bisson (RIDEM).

TOWN/PORT	PUBLIC DOCKAGE/LAYDOWN AREAS & AVAILABE SERVICES (WATER, ELECTRIC, SECURITY)	FISH DEALERS/PROCESSORS and SPECIAL SERVICES	TRANSPORTATION, FUELING, and ICE SUPPLY	GEAR/ ELECTRONIC SUPPLY and OTHER SERVICES	VESSEL & EQUIPMENT SERVICES
Bristol	- 41 Slips with 2 additional piers providing berthing for comm. Fishing vessels - boat ramp with medium use by quahog boats - laydown acreage = .6 acres -security by full-time harbormaster and US Coast Guard	- 6 dealer/processors located in Bristol - cold storage/refrigerated trucks available	- dealer/processor and/or common carrier *truck transportation - fuel via area gas stations, truck delivery, and local marinas	- marine electronics located at Herreschoff Pier	- not available
East Greenwich	- approximately 40 slips considered commercial - limited offloading of shellfish - no laydown acreage -security by full-time harbor master	- Rhode Island Clam is a dealer/wholesaler w/ 2 slips available for offloading, onsite laydown area - cold storage/refrigerated trucks available	- dealer/processor and/or common carrier truck transportation - fuel via area gas stations, truck delivery, and local marinas - ice available through Rhode Island Clam	- not available	- Anderson's Boat Yard serves small commercial vessels
Little Compton	- 2 piers that provide berths for approximately 26 vessels - boat ramp and adjacent parking used by commercial fishermen for launching and gear transfer -security by full-time harbor master - water, electric are available on the piers - no laydown acreage available	- 1 main fish dealer - ice house/refrigerated trucks and indoor fish weighing station available	- dealer/processor and/or common carrier truck transportation from both piers - fuel via area gas stations, truck delivery, and local marinas - ice available through dealer/processor	- not available	- not available
Narragansett (Point Judith)	- **40 piers all for commercial berthing – 202 assigned slips (as of July 2011) see below for more detail** - water and electric are available - RI DEM holds title over the port and maintains security along w/ US Coast Guard - some mooring sites are available - laydown acreage = 28.31 acres	- 9 dealer/processors located in Narragansett - cold storage /refrigerated trucks available -The Pt. Judith pier connected to the Narragansett Town sewer system -Town Dock and Pt. Judith's Fishermen's Company have waste water treatment systems	- dealer/processor and/or common carrier truck transportation - 2 fueling docks(Galilee Fuel) on site and fuel truck delivery -port dealer/processors supply ice. Additionally, many vessels have onboard ice making capability	- Point Judith Electronics - Superior Trawl - Trawlworks	- Rhode Island Engine Repair

TOWN/PORT	PUBLIC DOCKAGE/LAYDOWN AREAS & AVAILABE SERVICES (WATER, ELECTRIC, SECURITY)	FISH DEALERS/PROCESSORS and SPECIAL SERVICES	TRANSPORTATION, FUELING, and ICE SUPPLY	GEAR/ ELECTRONIC SUPPLY and OTHER SERVICES	VESSEL and EQUIPMENT SERVICES
Newport	- **state pier #9 managed by RI DEM exclusive for commercial fishing, offers 700' of dock space w/** 3 acres of laydown area **-37 assigned slips (as of July 2011) see below for more details** **-**The slip fee is $40 per linear foot - security by full-time harbor master -20x20 lobster holding facility used by commercial lobstermen -Long Wharf is city owned and designated for comm. fishing -Goat Island offers berthing for fishing vessels	- 10 dealer/processors located in Newport (included Middletown) - cold storage/refrigerated trucks available	- only access is local roads to interstate highway system - dealer/processor and/or common carrier truck transportation - fueling facilities on site or truck delivery - ice available through dealer/processor	- not available	- Newport Shipyard full service shipyard with some commercial clients
New Shoreham (Block Island)	- 1 wharf in Old Harbor dedicated to comm. fishermen provides offloading, berthing, and small laydown area - small cove in New Harbor used by lobster boats for mooring	- 3 dealer/processors located on Block Island - cold storage/refrigerated trucks available	- ferry to dealer/processor and or common carrier truck transportation - fuel via area gas stations, truck delivery, and local marinas - ice available through dealer/processor	- not available	- not available
North Kingston (Wickford/ Allen Harbor)	- 28 Berths solely for comm. fishing on Town Wharf -security by full-time harbor master and harbor commission - Gardiner's Wharf provides offloading	- Gardiner's Wharf Seafood located on G.W. Wharf provides offloading - cold storage/refrigerated trucks available -A total of 7 dealer/processors	-dealer/processor and/or common carrier truck transportation - fuel via area gas stations, truck delivery, and local marinas - ice available through dealer/processor	- not available	- Wickford Shipyard provides some commercial services including metal fabrication and welding
Portsmouth	- municipal boat ramp used by shellfishermen to launch boats and exchange gear - 8 piers, 1 wharf, and 320 berths - combination of limited commercial and recreation use - 4.75 acres of laydown area	- 2 dealer/processors located in Portsmouth - cold storage/refrigerated trucks available	- dealer/processor and/or common carrier truck transportation - fuel via area gas stations, truck delivery, and local marinas - ice available through dealer/processor	- numerous businesses available including Cay Electronics, Custom Navigation Systems, and Life Raft and Survival Equipment, Inc.	- lifts, cranes, workshops, and forklifts available for marine repair

TOWN/PORT	PUBLIC DOCKAGE/LAYDOWN AREAS & AVAILABE SERVICES (WATER, ELECTRIC, SECURITY)	FISH DEALERS/PROCESSORS and SPECIAL SERVICES	TRANSPORTATION, FUELING, and ICE SUPPLY	GEAR/ ELECTRONIC SUPPLY and OTHER SERVICES	VESSEL and EQUIPMENT SERVICES
Providence	- full and part-time harbor master and receives monies from US Dept. of Homeland Security for port security	- 2 dealer/processors located in Providence - cold storage/refrigerated trucks available	- transportation includes rail reaching major US connections, interstate highway system, and sea - dealer/processor and/or common carrier truck transportation - fuel via area gas stations, truck delivery, & local marinas.	- not available	- Promet Marine Services Corp. provides sandblasting and painting, welding, mechanical, and electrical repair services to 98% of Rhode Island's fishing fleet
South Kingston	- two 35 ft. berths for commercial fishing -security by Waterfront Advisory Commission	- 12 dealer/processors located in South Kingston	- fuel via truck delivery, and local marinas	- not available	- not available
Tiverton	- security by Harbors & Coastal Waters Management Commission - there is some laydown acreage available	- 3 dealer/processors located in Tiverton - processing is available on pier 1 - cold storage/refrigerated trucks available	- dealer/processor and/or common carrier truck transportation - fuel via area gas stations, truck delivery, and local marinas - ice available through dealer/processor	- not available	- Quality Yachts does some commercial fishing vessel repair and provides some berths
Warren	- 40 to 45 quahog boats located on the docks and piers along the waterfront including Town Dock - Town Wharf has several larger fishing vessels and 2 large trawlers	- Blount Seafood processes clams & other seafood - 3 additional dealer/processors located in Warren - cold storage/refrigerated trucks available	- dealer/processor and/or common carrier truck transportation - fuel via truck delivery and local marinas	- not available	- Blount Boats repair, construction, fabrication, and machining - Ginalski Boatyard
Warwick 70% of R.I. shellfishermen Located here (150-200)	- city owned floating dock heavily used by comm. fishermen - pier adjacent to Town Landing has 20 berths exclusive for comm. fishing - 6 moorings off the Town Landing - boat ramp used heavily for launching and transferring gear	- 6 dealer/processors located in Warwick - cold storage/refrigerated trucks available	- dealer/processor supplied truck transportation and/or common carrier - fuel via area gas stations, truck delivery, and local marinas - Ray's Bait is a bait/fuel dock used by the shell fishing fleet - ice available through dealer/processor	- Ocean Marine	- not available

Point Judith (Galilee) and Newport Port Overviews

Rhode Island's major premier commercial fishing port is located at Point Judith in the town of Narragansett. The Point Judith commercial pier is owned and managed by the state (RIDEM), primarily for commercial fishing as noted above. In 2010, Point Judith ranked as the 4th port in New England and 26th largest U.S. port in dollar value of landings. For perspective, in 2005 Point Judith was ranked the 15th largest port in the U.S. for value of landings and 22nd for landings weight (NMFS 2010). MIT Sea Grant reported in New England Fishing Communities 2001, "the port of Point Judith has all of the necessary components for an active fishing port" (Hall-Arber et al. 2001). Point Judith has sufficient infrastructure to support its commercial fishing industry, as well as provide shore-side service to fishermen around the state (Colburn et al 2008). Please see the video link Point Judith Visions http://vimeo.com/27624052.

According to the RIDEM, the number of commercial vessels in the port of Galilee (Point Judith) in 2004 was 230. Vessels ranged from 45-99 feet with most being groundfish trawlers. Of these, 55 were between 45 and 75 feet and 17 were over 75 feet (Hall-Arber et al. 2001). In 2004, Point Judith was ranked 24th in value of landings by port in the U.S. (sixth on the East Coast) (Colburn et al 2008). A new Port of Galilee Taskforce Commission sponsored by Representative Tanzi and was approved on June 28th 2011. A link to the text of the bill offering a description follows: http://www.rilin.state.ri.us/BillText11/HouseText11/H6260.pdf

Newport, which includes the second state owned and managed (RIDEM) commercial pier, has the infrastructure and services to support its commercial fishing fleet, but continues to experience some loss in fishing support services (Colburn et al. 2008). In 2009, there were 41 commercial vessels with federal licenses listing Newport as their home-port. Newport was ranked 75th among U.S. fish ports for landings value in 2008, and 60th by weight. In recent years, lobster and monkfish have been among the most valuable commercial species landed in Newport (NMFS 2010).

As previously noted and depicted in the Rhode Island Commercial Fishing Industry Infrastructure, a complete compliment of shore-side support services for commercial fishing are conveniently available within the state. Because of the dynamic changes in overall commercial fishing activity, port-by-port infrastructure within the state will need to be monitored to assure continued support/services exist.

Table 4.3: Point Judith Port Summary (July 2011)

Type of Slips	Number of Slips
Assigned	202
Permanent	157
Temporary*	45
Assigned Dragger Permanent	29
Assigned Inshore Lobster Vessel	70
Offshore Lobster Vessel**	11

*Temporary Slips are from short term and transient slips
**Offshore lobster vessels use short term slips. Areas assigned include the remaining non-lobster trawl fleet that use short-term available open slips.

A daily port manifest of in-port vessels is completed. Transient slip usage is monitored by RIDEM daily (usually out-of-state vessels). The cost is $50 per day plus $1 per foot surcharge based on vessel length and

billed monthly. There are 45 commercial fishing vessels on the waiting list. This is a cumulative list by application date and not culled. Available slips are assigned to the first date eligible applicant by vessel size. The actual number of waiting list commercial fishing vessels is substantially less than 45. The list is culled when applicants are contacted for open slips. The total capacity is dependent on vessel length but estimated to be 250 vessels. Proof of insurance is required to receive a vessel slip (see map below for Point Judith port land lots).

Point Judith FY2010 Revenue:

Land Leases: $524,456.64
Berthing: $373,619.33 (included Party/Charter Vessels)
Parking Fees: $126,435.00

Total: $1,024,510.97

FY 2010 Expenditures:
Division Operating: $ 479,145 (includes both Galilee *and* Newport)
Capital Budget: $337,957 (Galilee only)

State Pier # 9, Newport, Rhode Island Summary (July 2011)

A total of 39 permanently assigned commercial fishing vessel slips are in Newport. A new finger pier is being added to accommodate 6-8 vessels which are monitored daily with minimal transient vessel usage (same cost as Point Judith). There is no waiting list. Total capacity is dependent on vessel length but estimated to be 60 vessels.
Annual General Fund Revenue: Berthing Permits: $ 77,666.67 (FY2008)

Description of Point Judith (Galilee) and Newport Slip Assignment Plan

There are three basic types of dockage needs common for in-the-water boats: permanent slips, short-term slips, and transient slips (for off and on loading). Permanent and short-term slips are often from a common pool of slips and somewhat interdependent. For example, if permanent slip holders are less active or absent for any given reason, short-term slips may be available. Transient dockage is primarily used for off-loading fish, landing and unloading supplies, gear, and ice and is often adjacent to dockside support industry catering to these needs. The lack of short-term slips may infringe on transient slippage necessary for commerce. This is the general slip assignment plan in use at state-managed commercial piers at Point Judith and Newport.

General Navigation

Navigation: the following website provides navigational information – the GIS data in this report contains docks and channels depth. http://www.nae.usace.army.mil/navigation/navigation2.asp?mystate=ri – contains channels with coordinates and current status reports. Generally full depth and width channels in federally maintained ports i.e., Providence and Galilee ports. Newport Harbor is naturally deep and has not been dredged (source: Dan Goulet email: dgoulet@crmc.ri.gov)

Transportation Description

Transportation – A common carrier is defined as a company that transports goods on regular routes with established rates. There are several common carriers and local trucking services used. Dealers and processors also typically operate various, company-owned refrigerated vehicles. Pray Trucking is a primary source of this type of transport for the Rhode Island commercial fishing industry. Pray specializes in the transport of fresh and frozen seafood and focuses on LTL (less-than-truckload) shipments. Pray trucks visit ports in Jessup, MD, Narragansett, RI, and New Bedford and Boston, MA daily to pick up fresh seafood. Pray has facilities in Seekonk (headquarters) and Boston, Massachusetts and Jessup, Maryland. Pray deliveries are based on geographic location. The facilities in Seekonk and Boston reach markets around New England including New York City and Philadelphia. The facility in Jessup travels to central Pennsylvania, Delaware, Washington D.C., and Virginia. (Source: Pray Trucking Website)

GIS Map 4.5 Point Judith Land Lot Map

PREFACE - SUBJECT PHOTOGRAPHS

OVERLAY MAP SHOWING LAND TYPES

- 3 -

Rhode Island Commercial Fishing Community Dependency – Section 4.3

In the reauthorization of the Magnuson-Stevens Act (MSA) in 1996 "fishing community" was defined as "a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, captains and crews and fish processors that are based in such community". In 1998 NMFS added the new national standards of the MSA and further defined a fishing community as "a social or economic group whose members reside in a specific location and share a common dependency on commercial fishing or on directly related fisheries-dependent services and industries."

Included in the new standards was Item 8 which dictates: Take into account the importance of fishery resources to fishing communities to provide for the sustained participation of minimize adverse impacts to, such communities (consistent with conservation requirements). Social science definitions of "fishing community" include (1) a certain level of visible connection to the industry (boats, gear, fishing-related businesses) and other infrastructure elements; (2) connections among on-land and at-sea networks; (3) the frequent role of kinship in the labor process; (4) multiple household and family-level ties to fishing (with many fishermen, different generations, and gendered fishing-related tasks); and (5) the frequent persistence of a sense of a cultural connection to fishing through changes from small-boat to large-boat, family to industrial, commercial to recreational fishing and even to fishing-related tourism that involve little actual fishing activity (Colburn et al. 2008).

The two main references of fishing communities that provided the informational background used in preparing the current Rhode Island Community Dependency were New England's Fishing Communities (Hall-Arber et al. 2001) and Community Profiles for Northeast U.S. Marine Fisheries (Colburn et al. 2008). Rather than repeat the broader based information contained in these excellent references interested readers are encouraged to review them directly (See Data Source Description of Selected Data – Appendix (C)).

When describing a "Fishing Community" it is sometimes difficult to separate the larger community from the specific places and locals where commercial fishing industry activity is centered. Qualifying and quantifying community wide dependency is elusive, what can be said is that the success or failure of fisheries is inexplicably bound to the notion of community.

Twelve Rhode Island communities were selected to describe at-sea and on land networks that have some type of involvement with commercial fishing including shore-side fishery dependent businesses. These communities with commercial fishery involvement were profiled based on total commercial fisheries landings volume and value, number of federal and state active permitted vessel landing fish and shellfish, dominant gear types, top species landed and resident commercial fishermen possessing a federal northeast fisheries permit. The number of licensed high volume dealers and processors by town/port are reported in Table 4.2 (RI Commercial Fishing Industry Infrastructure).

Table 4.4 – Important RI Commercial Fishing Community Dependency Factors
Number of State & Federally Permitted Vessels, Number of Fishermen Licensees, Landings (Pounds & Value), Predominant Gear and Key Species by Port (2010)

Port	No. of State Permitted Vessels* No. of commercial fishing licensees	No. of Home Ported Active Federally Permitted Vessels* No. Vessels Landing in Port**	Landings (pounds)		Value of Landings		Predominant Gear Types	Top Species Landed by Value
			Total RI landings, lbs (RIDEM)	Federally permitted vessels	Total RI landings, value (RIDEM)	Federally permitted vessels		
BRISTOL	59* 137	5 0**	2,410,236	175,700	$686,214	$44,733	pots & traps, rakes	quahog, whelk, soft clam
LITTLE COMPTON includes Sakonnet Point	39* 60	35 9**	2,661,838	2,657,150	$2,741,511	$2,736,063	gillnet, pots & traps	goosefish, lobster, scup
NARRAGANSETT includes Point Judith, Galilee, Jeruselem	209* 147	210 118**	34,173,278*	33,268,557	$31,645,756	$31,368,148	trawls, pots & traps	lobster, Loligo, fluke
NEW SHOREHAM (Block Island)	13* 60	15 5**	144,547	143,658	$173,371	$167,500	gillnet, trawls	goosefish, lobster, skates
NEWPORT	40* 65	52 23**	7,077,974	7,115,239	$6,859,221	$6,673,991	trawls, pots & traps	lobster, jonah crab, goosefish
NORTH KINGSTOWN includes Davisville, Saunderstown, Wickford	57* 175	13 3**	25,156,120	24,145,642	$8,563,883	$9,668,868	trawls	Illex, mackerel, Loligo
PORTSMOUTH	28* 81	CR 0**	1,398,348	confidential	$259,959	confidential	by hand, diving, rakes	quahog, soft clam, lobster
SOUTH KINGSTOWN includes Wakefield, Snug Harbor, Potter Pond, Peacedale	60* 268	20 19**	259,959*	132,427	$366,097	$335,294	hook & line, pots & traps	fluke, striped bass, lobster
TIVERTON	58* 135	6 4**	430,731	507,370	$546,722	$545,804	gillnet, trawls	goosefish, fluke, surf clam
WARREN	35* 77	6 0**	2,434,771	2,116,988	$524,013	$1,899,192	rakes, dredges	quahog, soft clam, surf clam, lobster
WARWICK includes Apponaug, Warwick	188* 363	4 1**	7,923,445*	2,989,804	$1,620,698	$1,589,753	rakes, pots & traps	quahog, soft clam,
BARRINGTON	22* 48	0	N/A	N/A	TBC	TBC	rakes, lobster pots, rod & reel	quahog, lobster, fluke
EAST GREENWICH	79* 61	2**	N/A	N/A	TBC	TBC	rakes	Northern quahog
JAMESTOWN	25* 60	0**	N/A	N/A	TBC	TBC	lobster pots, rakes, rod & reel	lobster, quahog, fluke
WESTERLY Includes Watch Hill, Charlestown	80* 200	0**	N/A	N/A	TBC	TBC	pots & traps, rod & reel, rakes	lobsters, fluke, Northen quahog

Number of State Permitted Vessels* Number Vessels Landing in Port**
Number of Home-Ported Active Federally Permitted Vessels[2]
Source: RI Commercial Fishing Declaration License List (Margaret McGrath), RI Commercial Fishing License List (Dan Costa), Federal Vessel Permit List – VTR & Dealer Databases generated by Julie Olson

In 2010, Rhode Island communities with significant fishing industry activity include Bristol, Little Compton, Pt. Judith, New Shoreham, Newport, North Kingston, Portsmouth, South Kingston, Tiverton, Warren, Warwick (East Greenwich), Barrington, Jamestown, and Westerly. Point Judith and Newport, the states two main commercial fishing ports are located in lower Narragansett Bay in closer proximity to oceanic waters and homeport the bulk of the larger fishing vessels. Upper Narragansett Bay communities are home for a variety of smaller vessels including Bay draggers, lobster boats, and bullraker skiffs.

Section Endnotes: Section 4.4

- Dealers and processors typically operate company owned refrigerated vehicles as their means of transporting fish products.
- Support businesses include net builders and other gear supply businesses, bait and ice suppliers, shipyards, fuel companies, ship chandlers, engine and deck machinery sales, and repair and marine electronics.
- "Coastal life in the northeast is facing rapid social and economic change. Those engaged in fishing-related activities are leaving waterfront areas that they have traditionally occupied to make way for tourism development and second home markets, often in response to rising property values. Tighter fishing regulations, higher fuel prices and declining stocks have also transformed the structure of the fishing industry.
- Commercial fishing dependent communities are now and in the future under pressures that threaten their viability.
- Fishing locations are obviously influenced by fishing gear type and where to find targeted species; but effort is also differentiated by port proximately to fishing ground, vessel size, area closures, gear conflicts, regulatory restrictions and economic conditions.
- Going forward, mapping pattern changes in where fishing by gear type occurs may help to better understand the direct and indirect impacts of fishery regulations and other factors that affect commercial fishing activity.
- The shore-side infrastructure, which supports and facilitates commercial fisheries activity within the state is for the most part, port and area specific. However, there exist essential generic support functions, which provide statewide coverage. Collectively, the state's infrastructure serves the commercial fishing industry well.
- According to NEFSC/SSB staff, many small ports in the Northeast are under greater pressure to maintain viable commercial fishing support services and function. (Personal communications: A. Kitts, L. Colburn, P. Clay). Smaller commercial port contraction is an observed phenomenon with common root causes primarily stemming from fishery regulation impacts and resulting economic pressures.
- Qualifying and quantifying community wide dependency is elusive, what can be said is that the success or failure of fisheries is inexplicably bound to the notion of community.
- Promet Marine Services, the states principle shipyard located in Providence, announced in October 2011 a transformation from shipyard services to scrape metal recovery will occur. The immediate and long-term impacts to the Rhode Island and regionally dependent commercial fishing fleets will be significant in terms o local shipyard service access.

Chapter 5

Demographic Profiles: Section 5.0

To accurately evaluate the impact of the commercial fishing industry on Rhode Island's economy, the number of persons actively engaged in the harvesting of seafood needs to be quantified. Identifying the individuals active in the industry will help inform policy makers and guide future regulatory actions. Understanding the impacts of these actions on the commercial fishing industry as a whole requires knowledge of the social and economic characteristics of commercial fishermen. This information is important for the development of both state and federal fishery management plans as required by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006.

As a group, commercial fishermen can be difficult to identify through traditional demographic surveys. The United States Congressional Research Service states that current estimates of the number of U.S. commercial fishermen are suspect. Part of the problem lies with how "commercial fisherman" is defined and how employment data are collected. Currently there are several methods for estimating the number of individuals working as "commercial fishermen".

As discussed earlier in this report, NMFS has developed an economic input/output model that uses ex-vessel revenue to extrapolate employment data. There are two recent NMFS reports that use this model, the most recent of these two reports is based on 2008 IMPLAN data (Steinback 2008), and the other is based on 2006 IMPLAN data (Steinback and Thunberg 2006). Additionally, NMFS attempted to quantify the number of commercial seafood harvesters based on employment data from the Bureau of Labor Statistics and the Census Bureau. Details concerning the methodology used for this analysis can be found in the NOAA Technical Memorandum NMFS-NE-211 (Thunberg 2008). The results of these three NMFS reports are summarized in Table 5.1.

Information collected by the RIDEM can be used to estimate the number of commercial harvesters. The RIDEM issues all of the necessary permits to legally operate a commercial fishing vessel and to legally land a commercial catch in the state of Rhode Island. The RIDEM issued Vessel Declaration permit is mandatory for a commercial fishing vessel to land in Rhode Island. Data on crew size is requested as part of the Vessel Declaration permitting process, however it is not required to obtain a permit. This information is summarized in Table 5.1. It should be noted that the Vessel Declaration permitting process does not track vessel activity, and every vessel that files for a permit is not actively engaged in harvesting full time and may in fact not actually land any product for that given year. This information does, however, provide a benchmark for the number of individuals who derive some of their yearly income from commercially harvesting seafood. Additionally, many vessels have rotating crews, so the number of reported crewmembers is for any given time, as opposed to a count of the total number of individuals who work as crewmembers, which is difficult to track.

In addition to vessel permitting, RIDEM issues licenses to individuals allowing for the legal harvest of seafood. These licenses include a Commercial Fishing License (CFL), a Multi-Purpose License (MPL), and a Principal Effort License, all with different endorsements available. Data derived from RIDEM licensing records are summarized in Table 5.1. It should be noted that crewmembers are not required to obtain any licenses or permits to work on a vessel and individuals can obtain more than one license.

Table 5.1: Estimates of Commercial Harvesters

	NMFS I/O MODEL – 2006 IMPLAN DATA	NMFS I/O MODEL – 2008 IMPLAN DATA	NOAA BLS DATA (2008)	RIDEM VESSEL DECLARATION CREW (2010)	RIDEM ACTIVE PERMITS (2010)
COMMERCIAL HARVESTERS (may include crewmen)	1,534	1,773	1,098	2,143	1,314

Currently the RIDEM is considering proposing a change to the licensure registration and procedure to stop the issuance of dual licenses. This action should be considered an important step to quantifying the number of licensed commercial harvesters in Rhode Island. However this does not address the lack of any accurate quantifiable data on the majority of the commercial harvesting work force, which are the crewmembers. The Congressional Research Service has suggested that a resolution may hinge on finding better ways to identify and count people who work in a very fluid and transient industry. One consideration is a mandatory crew registry or licensure. This has been implemented in Alaska for sometime and can be used to identify the number of individuals participating in the commercial harvest. If crewmember information is sought through a licensure program, the benefit of such a program needs to be weighed against the associated cost.

In the absence of a crew registry or licensure process the only way to provide any information on crewmembers is an intercept survey. Through cooperation with the Social Sciences Branch (SSB) of the Northeast Fisheries Science Center (NEFSC) Cornell Cooperative Extension compiled an "intercept questionnaire" for both captain and crewmembers specifically for this project. The intercepts were conducted at select ports throughout Rhode Island. The goal was to develop methodologies for creating and implementing a survey program that could be expanded upon for future studies in Rhode Island and other states in the region

Intercept questionnaires (Appendix (F)) were compiled in an effort to answer key questions about the commercial fishing labor force as identified by the Project Steering Committee for this industry profile. These questions include:

- How many households are supported by the commercial harvest of seafood?
- What percent of these households' income is generated by commercial fishing?
- What is the race, age and ethnicity of harvesters; and where do these fishermen reside?

Data derived from intercept questionnaires was compiled with data from RIDEM, NOAA, and NMFS and analyzed in order to characterize the population of commercial fishermen in Rhode Island.

The intercept questionnaires were distributed through the RIDEM listserve, reaching approximately 280 recipients. Of the 280 solicitations, 12 individuals returned questionnaires. The number of replies further reinforces the need for dockside sampling if the majority of commercial harvesters are to be sampled.

Cornell also conducted dockside intercept interviews at the ports of Pt. Judith, Newport and East Greenwich. Of the 97 individuals asked to participate in the survey 66 filled out questionnaires. That is a 68% participation rate in the active intercept interview, compared to a 4% participation rate in the passive listserve mailing.

Income Derived From Commercial Fishing: Section 5.1

Of the crewmembers interviewed, 68% stated that 100% of their household income is derived from commercial fishing, and 27% percent claimed that 75% of their household income was derived from commercial fishing. Additionally, 88% stated that they fished full time with only 12% of the overall crew personnel interviewed worked additional jobs to supply supplemental income to their household. The sources of secondary income spanned a wide range of vocations, including being a writer, marine upholsterer, landscaper, fish processor, municipal worker and musician.

In contrasting the personal economic profile of the crewmembers to that of the 22 captains who were interviewed, the results showed that of the 49% whom claimed that commercial fishing provided 50% or less of their total household income, 55% worked in vocations outside of commercial fishing to help supplement income. However, further breakdown of the captains 'questionnaires by gear type shows that the fishery one participates in plays a large role in determining full time status. Over 85% of all trawler captains made 100% of their household income from commercial fishing and not one worked another job. As opposed to bullrakers and hook and line fishermen of whom not one made 100% of their household income from fishing and 75% worked other jobs or received benefits from pensions.

The discrepancies between the different gear types and the percent of household income derived from in this group from may be based on licensing and permitting restrictions and the available resource. This is suggested by the fact that 71% of those reporting 50% or less of their household income derived from harvesting shellfish reported that there is "less out there" and 50% of hook and line fishermen cited "regulations" "reduced quota" and "closures" as the reasons for their reduced earnings.

Age of Commercial Harvesters: Section 5.2

Of the captains interviewed, most have been involved in the commercial fishing industry for 30 years or more, with some fishing for over 50 years. Additionally most crewmembers are long standing members of the commercial fishing community, with an average age of 43 and most having worked for over 20 years in the industry.

The average length of time that the captains interviewed have been involved in commercial fishing was 29 years with a range of 15 up to 50 years. The average age of all RIDEM permitted commercial harvesters is 54 years old. Crewmembers interviewed had a median age of 44 years with a mode of 32 and ages ranging from 20 to 71 years. Average length of time that crewmembers have been involved in the commercial fishing industry was 23 years, ranging from 8 months to 55 years.

AGE RANGE	NUMBER OF RESPONDANTS
20-29	8
30-39	11
40-49	21
50-59	12
60-69	1
70-79	3

This data is supported by the 2001 report from the MIT Sea Grant College Program, entitled *New England's Fishing Communities* that noted present recruitment of new fishermen is at a standstill as limits on permits,

well-established occupational networks, the end of the Fisheries Program at URI and high start-up costs inhibit new entrants to the fishery.

Education Level of Commercial Harvesters: Section 5.3

Looking at education, there is a variation in the general trends when comparing captains of different gear types and among crewmembers from all fisheries. Our survey revealed that seventy-five percent (75%) of all hook and line fishermen, and shellfishermen have college degrees ranging from associates to masters degrees, while not one trawler captain surveyed has received a college degree. There is much variation in the crewmembers as well. The majority, 68%, graduated from high school, but 5% have no secondary schooling degree and 27% have a degree from a college or university. An interesting correlation among crewmembers exists – of the 13% of crewmembers who work part-time, 66% have college degrees.

One key respondent in *New England's Fishing Communities* (Hall-Arber et al. 2001) survey commented that the typical Point Judith fisherman is around 40 years old and has some college education. The *New England's Fishing Communities* survey also found that of the total individuals interviewed, both captain and crewmembers combined, less than half (30%) had academic degrees. The perceived decrease in the number of harvesters with college degrees may be linked to the end of the Fisheries Technology Associate's Degree program that was offered by URI to prepare and train future commercial fishermen.

However, anecdotal evidence suggests that some fishermen choose to engage in continuing education through the Gulf of Maine Research Institute and have begun to take an active role in learning more about the NMFS stock assessment process.

Residence: Section 5.4

An important consideration when evaluating the impact of changes in fisheries legislation is what communities will be impacted and by how much. Close to 80% of all captain and crew live within 20 miles of their homeport in Rhode Island. The average distance of crew to their home was 23 miles, however 8% of crewmembers interviewed were transient workers who considered their homes to be over 50 miles away and a few were up to 300 miles away.

Based on key informant interviews *Hall-Arber et al.* (2001) found that the majority of fishermen in Pt. Judith live within a 20-mile radius. It was also noted that many of the fishing communities are being forced out of coastal areas as gentrification in the state increases. This is particularly noticeable in Jamestown and Newport. Analysis by *Hall-Aber et al.* (2001) rank the major New England ports from the most to least gentrified. Newport, Pt. Judith and Jamestown have a gentrification ranking of 5, 7, and 11 respectively.

Race/Ethnicity of Commercial Harvesters: Section 5.5

According to the US Census Bureau the population of Rhode Island is predominantly Caucasian, 81.4%. African American persons accounted for 5.7%, and persons of Hispanic/Latino origin made up 12.4 % of the population. The results of the dockside intercept questionnaires show similar findings, however the demographic is skewed towards a larger Caucasian majority. Of the crewmembers surveyed 94.6% identified themselves as Caucasian, 4% as African American and 2% as other.

New England's Fishing Communities (Hall-Arber et al. 2001) reported similar findings. Stating that little ethnic diversity exists in the harvesting sector, and the overwhelming majority of fishermen are Caucasian males.

However, a majority of fish processing workers are ethnic minorities with some of the fish houses busing in workers from Providence.

Vessel Operator Permits: Section 5.6

As stated earlier, the RIDEM issues all of the necessary permits to legally operate a commercial fishing vessel in the state of Rhode Island. The RIDEM issued Vessel Declaration permit is mandatory for a commercial fishing vessel to land in Rhode Island. The RIDEM has issued 1,454 Vessel Operator Permits (Federal & State Vessels) to vessels home-ported in RI for the year 2011.

Licensed Crewmembers: Section 5.7

The RIDEM issues and manages all licenses and permits allowing for the legal harvest and sale of seafood in the state. The RIDEM reported 2,441 permits were issued in 2011. Of these 1,314 persons actively landed seafood under their permit (Table 1.19). The RIDEM does not track whether or not the inactive permits are still working in the industry as crewmembers or shore-side support. Based on the results of the intercept questionnaires, 57% of crewmembers hold a commercial fishing license from the RIDEM. Of the permitted crewmembers 16% hold a Commercial Fishing License (CFL), 36% hold a Multi-Purpose License (MPL) and 9% replied "all of them" inferring that they hold multiple licenses with additional endorsements. None of those crewmen surveyed held a federal vessel permit.

Independent Contractors: Section 5.8

The Census Bureau classifies most individuals engaged in the harvesting of seafood as non-employers, typically referred to as independent contractors. Non-employers are businesses without paid employees that are subject to federal income tax. Most non-employers are self-employed individuals operating very small-unincorporated business. In the commercial harvesting sector there is a strong sense of independence, and most fishermen take pride in the fact that they have no boss, answer to no one and are responsible for their own success or failure. This is reflected in how they do business. The majority of the crewmembers, and sometime non-vessel owning captains, work for a share of the profits earned that day. This type of pay scale is called a "catch share". Of the crewmembers surveyed, 93% received their pay on a catch share basis.

According the Census Bureau, the number of non-employer individuals working in the RI Agriculture, Forestry, Fishing and Hunting sector was 1,191.

This general category includes individuals primarily engaged in growing crops, raising animals, harvesting timber, and harvesting fish and other animals from a farm, ranch, or their natural habitats. This number does not accurately reflect the number of individuals operating in the harvesting sector, but at this time it is the best available information.

Section Endnotes: Section 5.9

- The estimate of the number of full and part-time Rhode commercial fishermen is 2,500 including crewmen.
- The median age of crewmembers responding to study survey was 44.
- Many vessels have rotating crews, so the number of reported crewmembers is for any given time, as opposed to a count of the total number of individuals who work as crewmembers, which is difficult to track.
- Of the crewmembers interviewed, 68% stated that 100% of their household income is derived from commercial fishing, and 27% percent claimed that 75% of their household income was derived from commercial fishing.
- Over 85% of all trawler captains made 100% of their household income from commercial fishing and not one worked another job. As opposed to bullrakers and hook and line fishermen of whom not one made 100% of their household income from fishing and 75% worked other jobs or received benefits from pensions.
- The average age of all RIDEM permitted commercial harvesters is 54 years old.
- Close to 80% of all captain and crew live within 20 miles of their homeport in Rhode Island.
- According to the US Census Bureau the population of Rhode Island is predominantly Caucasian, 81.4%.
- The results of the dockside intercept questionnaires show similar findings, however the demographic is skewed towards a larger Caucasian majority. Of the crewmembers surveyed 94.6% identified themselves as Caucasian.
- The RIDEM issued Vessel Declaration permit is mandatory for a commercial fishing vessel to land in Rhode Island. The RIDEM has issued 1,454 Vessel Operator Permits (Federal & State Vessels) to vessels home-ported in RI for the year 2011.
- The RIDEM issues and manages all licenses and permits allowing for the legal harvest and sale of seafood in the state. The RIDEM reported 2,441 permits were issued in 2011. Of these 1,314 persons actively landed seafood under their permit.
- The majority of the crewmembers, and sometime non-vessel owning captains, work for a share of the profits earned that day. This type of pay scale is called a “catch share”. Of the crewmembers surveyed, 93% received their pay on a catch share basis.

Chapter 6

Fisheries Management and Governance

(Involvement and investment in Rhode Island Commercial Fisheries)

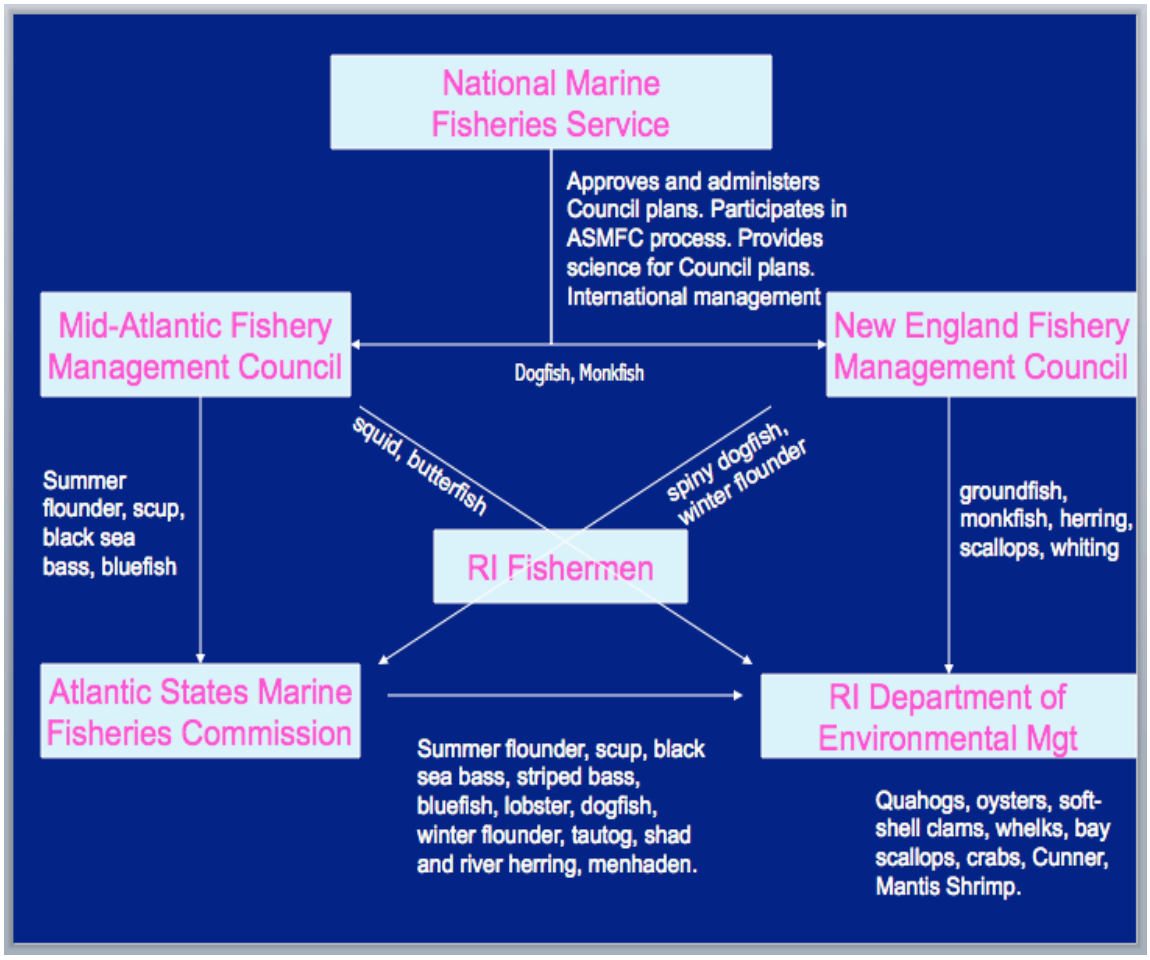
Fisheries Management – Section 6.0

Rhode Island's finfish, shellfish and crustacean resources and related commercial fishing activities are managed by various governmental agencies and regulatory bodies which have jurisdiction over different species and harvest areas. The entities that manage these species have overlapping, integrated and cooperative management functions and include: NOAA National Marine Fisheries Service; New England Fisheries Management Council; (NEFMC) Mid-Atlantic Fisheries Management Council; (MAFMC) Atlantic States Marine Fisheries Council; (ASMFC) and Rhode Island Department of Environmental Management (RIDEM). How these regulatory entities function together to manage Rhode Island's important commercial species is detailed in flow chart outlined in Figure 6.1 [Note: This information was included in a presention to the State Senator Fisheries Task Force (by Mark Gibson of the RIDEM on 2/9/11]. The report concludes that the majority of high value commercial species are rebuilding or rebuilt with stable or increasing harvest limits, there were notable exceptions including Southern New England American lobster, winter flounder, and yellowtail flounder. At present seven of the states key commercial species are either listed as over fished or over fishing is occurring on the stock: Atlantic cod, American Lobster, bluefin tuna, tautog, winter flounder, winter skate and yellowtail flounder. (Source: Ocean Samp 2010)

In addition to the regulatory hierarchy described, there exist important state based agencies, research and educational institutions, industry organizations and advisory councils that have vital roles and invested resources related to Rhode Island's commercial fisheries.

The contributions of these supportive organizations are described in Table 6.1.

Figure 6.1: Regulatory Entities: How they Function Together to Manage Rhode Island's Important Commercial Species



(RIDEM Mark Gibson) State Senator Fisheries Task Force

State Agencies, Academic Institutions, and Private Organizations Involved in Supporting the Commercial Fishing Industry in RI – Section 6.1

Table 6.1: Rhode Island Commercial Fishery Management Public and Institutional Investment Archive 2011

Agency	Mission	Activities	Number Positions & Pay Grade	Federal/State Funding 2010	Grant Title
Rhode Island DEM (Fisheries Management)	To ensure that the Freshwater, Marine, and Wildlife Resources of the State of Rhode Island will be conserved and managed for equitable and sustainable use.	The Division of Marine Fisheries protects, restores, and manages the fish resources of the state. They have a staff of 19 employees. The main office is located in Jamestown, RI. They operate over 200 boat launching ramps and shore fishing areas located through the state. The Division is responsible for setting seasons, size limits, methods of taking, and daily limits for the harvest of recreational and commercial fisheries in the state of Rhode Island. The Marine Fisheries section of the RI DEM is responsible for many activities which include commercial fisheries management and fisheries research. For more information see website:	17 positions 1- Acting Chief PG 39 -136A - Base: 67, 998 - 77,059 1- Deputy Chief PG 32 132A - Base: 58,572-66,304 2- Supervising Biologists PG30 - 030A Base: 54,363 - 61,479 9-Principle Biologists PG 27 - 327A - Base: 48,325 - 54,126 1- Vessel Captain PG 29 - 329A - Base: 51,940 - 58,431 1- Vessel Assistant Captain PG 24 324A - Base: 42,059-48,325 1- Finacial Officer PG 28 B26A - Base: 50,087 - 57,915 1 - Technical Staff Assistant PG 20 - 320A - Base: 37,414 - 41,853	1.) $181,332 2.) $99,878 Revenue Generated Funding - Port Operating Budget - $479,145 Port Generated Revenue - $1.1 million	1.) RI Administrative Support to ASMFC Fishery Management Process 2.) RI Lobster Research
RI DEM ACCSP	To produce dependable and timely marine fishery statistics for Atlantic coast fisheries that are collected, processed and disseminated according to common standards agreed upon by all program partners.	ACCSP is a cooperative state-federal program to design, implement and conduct marine fisheries statistics data collection programs and to integrate those data into a single data management system that will meet the needs of fishery managers, scientists and fishermen.	2 positions 1- Fisheries Specialist II PG 27 1-Fisheries Specialist I PG 24	$100,983	RI Atlantic Coastal Cooperative Statistics Program Project
Rhode Island Sea Grant	Rhode Island Sea Grant is an award-winning organization that works in the state, the region, and beyond to discover answers to issues affecting coastal resources and the people who depend on them. The program has two focus areas-Sustainable Coastal Communities & Ecosystems and Sustainable Fisheries & Seafood.	The Sustainable Coastal Communities Extension Program, located at the University of Rhode Island's Coastal Resources Center, works with state and local governments and coastal community members to create policies that help them manage their resources comprehensively through ecosystem-based management. The program also works with the state and communities to address climate change and coastal hazards and to develop vibrant waterfronts. The Fisheries Extension Program has been a major research and outreach component of Rhode Island Sea Grant for over 20 years and continues to evolve with ever-changing fisheries issues.	23 positions -Generic Positions 7- Program Management Staff 7- Coastal Communities Staff 6-Fisheries Staff 3- Legal Staff 1.5 FTE (staff) dedicated to Commercial Fisheries (source: Kathleen Castro)	TBC	TBC

Agency	Mission	Activities	Number Positions & Pay Grade	Federal/State Funding 2010	Grant Title
Rhode Island Coastal Resource Managemnet Council	"...to preserve, protect, develop, and where possible, restore the coastal resources of the state for this and succeeding generations through comprehensive and coordinated long-range planning and management designed to produce the maximum benefit for society from such coastal resources; and that the preservation and restoration of ecological systems shall be the primary guiding principal upon which environmental alteration of coastal resources shall be measured, judged and regulated."	The Coastal Resources Management Council is a management agency with regulatory functions. Its primary responsibility is for the preservation, protection, development and where possible the restoration of the coastal areas of the state via the issuance of permits for work with the coastal zone of the state.	The CRMC is administered by a council who are appointed representatives of the public and state and local government, and a staff of professional engineers, biologists, environmental scientists, and marine resources specialists. It is a state agency created by the General Assembly that balances economic considerations with environmental protection. Staff dedicated to commercial fisheries/aquaculture - 1 FTE	N/A	N/A
Rhode Island Economic Development Corporation	To create jobs, help companies expand and develop their workforce, and identify opportunities to bring new companies into our state.	The Rhode Island Economic Development Corporation (RIEDC) is the full service, official economic development organization for the state of Rhode Island. A quasi-public agency, the Corporation serves as a government and community resource to help streamline the business expansion in, and relocation to, Rhode Island. The agency assists companies with commercial real estate, business financing, workforce training and other relevant issues. Sectors of the RIEDC include: Marine Trades Industry, Science and Technology Advisory Council, Every Company Counts (ECC), Workforce Development, and Finance Opportunities.	No staff directly dedicated to commercial fisheries	N/A	N/A
State Senate Fisheries Task Force	The Taskforce is charged with working cooperatively with management agencies, educational institutions, environmental organizations, businesses and fishermen to meet the challenges ahead and recommend viable ideas and solutions for protecting the fishing way of life.	The purpose of the Taskforce are to: Track the status and trends of the fishing industries of Rhode Island, Understand the legal and regulatory mandates imposed on the fishing community to present ideas and identify challenges facing these communities, and propose legislative and regulatory recommendation for consideration.	8 - Senators 2 - Staff (Senate Policy Office)	TBC	TBC

Agency	Mission	Activities	Number Positions & Pay Grade	Federal/State Funding 2010	Grant Title
University of Rhode Island School of Fisheries (doctorate) Marine Affairs Program (masters)	The University of Rhode Island is the State's public learner-centered research university. We are a community joined in a common quest for knowledge. The University is committed to enriching the lives of its students through its land, sea, and urban grant traditions. URI is the only public institution in Rhode Island offering undergraduate, graduate, and professional students the distinctive educational opportunities of a major research university.	TBC	TBC	$Funded by total sponsored program awards of over $105 million in fiscal year 2010, nearly $75 million of which are from federal sources, researchers at The University of Rhode Island continue to have a major impact on issues that affect the region, the nation, and the world.	Saltonstall-Kennedy Grant Program - The economic impacts of "no fishing" zones on Stellwagen Bank National Marine Sanctuary: an analysis of the small-scale ground-fishing fleet and their local coastal communtities
Northeast Fisheries Science Center Narragansett Laboratory	Conduct ecosystem-based research and assessments of living marine resources, with a focus on the Northeast Shelf, to promote the recovery and long-term sustainability of these resources, and to generate social and economic opportunities and benefits from their use.	Foster coordination, cooperation, communitation and mutual respect among scientists, managers, and industry; and Enhance the data upon which fishery managament decisions are made.	TBC	TBC	TBC
Commercial Fisheries Research Foundation	The mission of the Commercial Fisheries Research Foundation (CFRF) is to support research that assists in the achievement of sustainable fisheries through the generation of better information and effective technologies for the benefit of individuals and businesses dependent on commercial fishing, consumers of seafood, and the public good.	The CFRF was founded in 2004 by a group of fishermen and others in the industry in order to establish an alternative process for supporting fisheries research that would be lead by members of the commercial fishing industry. Initially the Foundation's work focused on supporting collaborative conservation gear engineering projects, specifically in the groundfish fishery. The aim was for fishermen and scientists to work together to develop new gear or modify existing gear to allow fishermen to fish more selectively for species in abundance while protecting those stock in need of rebuilding.	12 - Executive Director, Aministrative Assistant, Interim Bookeeper, Director President, Director Vice-President, with 7 Directors	1.) $599,400 (2008-2013) 2.) $130,462 (2010-2011) 3.) $1,200,000 (2009-2013)	1.) Southern New England Collaborative Research Initiative (SNECRI) 2.) Rhode Island Commercial Fishing Industry -Profile 3.) Challenge Grant Program for Conservation Engineering Projects – Winter Flounder Bycatch Reduction
Atlantic Offshore Lobstermen's Assoc./ Bonnie Spinazzola (director)	Conservation and protection of the offshore lobster resource and offshore lobster industry. Our mission is sustainability for both the fishery and the industry long into the future.	membership meetings as needed, typically quarterly. The AOLA Board of Directors meets more frequently.	Twenty (20) active owners and 3 retired owners, representing 44 vessels, which equates to 55% of the active offshore lobster fleet). Our members have homeports in 4 states: NH, MA, RI, and NJ. Eight (8) owners, representing 12 vessels reside in Rhode Island. Our members are offshore lobster vessel owners, fishing primarily for lobster in federal waters (LCMA 3) and seasonall for Jonah crab.	N/A	N/A

Agency	Mission	Activities	Number Positions & Pay Grade	Federal/State Funding 2010	Grant Title
Ocean State Fishermen's Association	N/A	N/A	N/A	N/A	N/A
Rhode Island Commercial Fishermen's Association	N/A	N/A	N/A	N/A	N/A
Rhode Island Lobstermen's Association	N/A	RILA is a nonprofit association that works towards the implementation of practical and meaningful State and Federal regulatory measures which take into consideration the welfare of the fishermen while building a sustainable fishery.	Association Officers - President, Vice President, Treasurer Board Members -Point Judith – 1 member, Newport – 2 members, Wickford/Warwick - 1 member, Block Island - 1 member, Barrington/Bristol/Warren - 2 members, Sakonnet Point - 2 members	N/A	N/A
Rhode Island Shellfisherman's Association	N/A	N/A	N/A	N/A	N/A
RI Monkfishermen's Association	N/A	N/A	N/A	N/A	N/A
Sakonnet Point Fishermen's Association	N/A	N/A	The Sakonnet Point Fishermen's Association is made up of local fishermen, mostly combination lobstermen and gillnetters, who fish out of Sakonnet Point (Hall-Arber et al. 2001).	N/A	N/A
Eastern New England Scallop Association	"Working to preserve the New England small boat scallop fishery and fishermen"	N/A	N/A	N/A	N/A
RI Fishermens Alliance	Our mission is to educate the consumer and make a stand against these regulations that will ultimately destroy the fishing industry and our access to fresh local caught seafood!	N/A	N/A	N/A	N/A
NOAA Fisheries Statistics Office - Narragansett	The Office serves as the focal point within NOAA Fisheries for the development and evaluation of science and technology strategies and policies, and evaluation of NOAA Fisheries performance of its conservation and management mission from a scientific perspective.	The Office provides scientific advice on: Operational conservation and management resource decisions, as appropriate; Coordination of NOAA Fisheries activities to obtain ship and aircraft operational support; Leadership and management for activities related to the NOAA Fisheries Science Board; Coordination of scientific activities within NOAA Fisheries; Coordination of international scientific organizations; and Monitoring of global trends in fisheries.	1-Port Agent 2-Contracted Reasearch, Environmental, and Management Support (REMSA), Staff - Fisheries Port Sampling	TBC	TBC
Quonset Point Economic Development Corporation	The Rhode Island Economic Development Corporation's mission is to strengthen the Rhode Island economy through policies, programs, and projects, which enhance and enrich the business environment for public and private sectors in order to create prosperity for all Rhode Islanders.	The Quonset Development Corporation (QDC), a special purpose subsidiary of the Rhode Island Economic Development Corporation (RIEDC), a quasi-public company, is responsible for the development and management of the park.	No staff directly dedicated to commercial fisheries	TBC	TBC

For more information visit website:

RIDEM
http://www.dem.ri.gov/programs/bnatres/fishwild/index.htm

ACCSP
http://www.accsp.org/

RI Seagrant
http://seagrant.gso.uri.edu/

RI Coastal Resorce Management Council
http://www.crmc.ri.gov/

RI Economic Development Corporation
http://www.riedc.com/

State Senate Fisheries Task Force
http://www.rilin.state.ri.us/news/pr1.asp?prid=6722
http://www.suesosnowski.com/home/66-special-senate-taskforce-on-fisheries-releases-final-report-.html

University of RI School of Fisheries
http://www.uri.edu/cels/favs/

Northeast Fisheries Science Center Narragansett Laboratory
http://na.nefsc.noaa.gov/

Commercial Fisheries Research Foundation
http://www.cfrfoundation.org/

Atlantic Offshore Lobstermen's Association
http://offshorelobster.org/main/

Rhode Island Lobstermen's Association
http://www.rilobstermen.com/

Eastern New England Scallop Association
http://enescallop.com/

RI Fishermen's Alliance
http://enescallop.com/

NOAA Fisheries Statistics Office – Narragansett
http://www.st.nmfs.noaa.gov/st1/index.html

Section Endnotes: Section 6.2

- RI DEM Division of Marine Fisheries manages species within state waters, and represents the state on regional and federal fishery management entities. Within the Division there are 17 state staff positions and 2 positions under a cooperative state-federal statistical program.
- CRMC has one staff position dedicated to aquaculture regulation.
- Fisheries related academic programs occur at URI and Roger Williams University.
- RI Sea Grant Program supports the equivalent of 1.5 staff positions dedicated to fisheries work.
- The NOAA Northeast Fisheries Center Laboratory and NOAA Fisheries Statistics Office are located in Narragansett, RI.
- Some 14 commercial fishermen organizations are based in the state.
- Rhode Island's finfish, shellfish and crustacean resources and related commercial fishing activities are managed by various governmental agencies and regulatory bodies which have jurisdiction over different species and harvest areas.
- The majority of high value commercial species are rebuilding or rebuilt with stable or increasing harvest limits, there were notable exceptions including Southern New England American lobster, winter flounder, and yellowtail flounder.
- University of Rhode Island Commercial Fisheries Center at East Farm - The center serves as the home for the states fishing groups and organizations, and provides office and meeting space as well as a repository for information related to the groups and the fishing industry. It is also a site for fisheries researchers and educators to interact with working fishermen.

Appendix (A) Methodology

(Commercial Fishing Industry Profile Development Kit)

The Rhode Island profile document contains identification of specific data and information or sources used to generate reported study findings. These same data and information reference sources including literature citations can be used to guide further reports as they relate to the Rhode Island commercial fishing industry profile or as a generic blueprint for other geographic locations for similar profile development. Following are the methods the study team adopted, chronologically ordered in a step-by-step procedure. Those interested in similar undertakings to characterize commercial fishing on a geographic basis may find this retrospective account useful.

Step 1

Convene plenary committee of key representative of industry stakeholders, pertinent state and Federal Fishery Management and Regulatory agencies, research institutions and local government officials. The committees charge is to define the profile.

This approach while time consuming and sometimes contentious is critical to the profiles development process. The group can further function as a steering committee and guide the ongoing process to conclusion and provide preliminary groundtruthing and assessment of research findings.

Step 2

Start with a specific project description and work plan to include:

- Profile purpose and goals
- Identify specific information needed, why the information is important and how it will be used.

The primary questions to consider were:

- Who is engaged in the commercial fishing industry?
- What types of jobs, businesses, skills and investments are involved?
- How does the current harvesting, processing and distribution capacity relate to resource availability?
- How much total sales, income and employment does commercial fishing generate to the geographic economy?
- How is commercial fishing activity distributed through the state, commercial fishing community dependency and geographic proximity related to marine waters?
- What state based agencies, academic and research institutions?

To assist future efforts related to step 2, below is the CFRF Rhode Island Commercial Fishing Industry Profile Request for Proposals (RFP) directive.
http://www.cfrfoundation.org/wp-content/uploads/2010/12/Request-for-Applications-RI-Industry-Profile-11-1-10.pdf

Step 3

Based on Steps 1 and 2, the study team developed a profile work plan matrix and operational approach. The matrix format on the vertical axis lists specific information and tasks as identified and requested; and on the horizontal axis preliminary information, databases and potential governance sources are described (see **http://ccesuffolk.org/rhode-island-cfi-profile/**). RI commercial fishing industry operation plan (matrix) for planning guidance.

Step 4

Establish data access methods and agreements as needed. These should include collaboration with ACCSP State (contract) staff to assure access to the SAFIS data warehouse; and complete confidential data access agreement with NMFS to access or request information from (query) Federal Databases i.e. Vessel Trip Report (VTR) database.

Step 5

Complete comprehensive review of databases and available information sources related to profile task to locate existing (useful) date/info; identify information/data needs that can be obtained from existing data through specific inquiry (query). Isolate missing data/information needs and determine feasible approaches to develop the information relative to complexity, time and budget.

Step 6

Collaborative with project partners, research associates to collect, assemble and produce preliminary research findings.

Circulate research findings with project contributors and Steering Committee members to refine and complete the profile development process. Complete new initiatives that are reliable. Examples: Industry surveys/interviews; see attached survey summary: Conduct focus group discussions, run new data analysis, repeat proofing process and report findings.

Depending on the overall profile scope, depth of current data and information trends, and the magnitude of important data bases and information include extensive use of charts, graphs and various summary tables to serve as useful graphic methods to present/report findings in a concise and condensed format that can be readily updated to keep the profile relevant.

Appendix (B)

Data Assessment and Informational Needs for Improving

Northeast Regional Office (NERO) Commercial Fisheries Database System (CFDBS)

Commercial Fisheries Landings (pounds and dollars) by Species
Commercial Fisheries Landings Trends by Year
Trends in Rhode Island Commercial Fisheries Landings 2000-2010
Rhode Island American Lobster Landing Trends 2006-2010
Rhode Island Loligo Squid Landing Trends 2006-2010
Rhode Island Sea Scallop Landing Trends 2006-2010
Top Ten Species by Volume (Pounds) 2010
Top Ten Species by Value (Dollars) 2010
Categories or Specialized Categories of Fisheries Landings, Rhode Island 2010
RI Landings from Out of State Vessels 2010
Landings for RI State Home-ported Vessels by State 2010
Top Ten Species by Volume (Pounds) 2000
Top Ten Species by Value (Dollars) 2000
Landings in Pounds of Important Species

Assessment:
This commercial fisheries database proved to be a valuable tool to describe relative fishery landing data. The accuracy of the data is difficult to assess because the database is continually updated through an ongoing reconciliation process.

Federal Vessel Trip Report Database

Rhode Island Percent of Landings (Pounds) by Gear Type 2010
Rhode Island Landings in Pounds by Gear Type for 1999-2008
Active RI Home-Ported Commercial Fishing Vessel Fleet Summary 2010
Rhode Island Landings by Gear Type, Pounds, and Value 2010
Rhode Island Landings by Gear Type, 1999-2008
Effort of Multispecies Groundfish - Permitted RI Home-ported Vessels 2007-2010
Fishing Effort by Gear Type & Number of Trips 2010

Assessment:
Federal Vessel Tip Reports (VTRs) are presently scanned into the database by NMFS. VTR information is useful relative to fishing effort but is not a good source relative to landing values. In the future VTR electronic reporting is planned. Electronic reporting will speed up the VTR data reporting to real-time status. Additionally, this process may improve the accuracy of where fishing occurs with the inclusion of GPS connection and improvement in discard reporting is expected.

STANDARD ATLANTIC FISHERIES INFORMATION SYSTEM (SAFIS) Data Warehouse
Number of Trips and Fishing Hours of Gear Used by Area Fished 2010
RI Lobster Fishery Catch & Effort 2010
Rhode Island Lobster Fishing Trips by Area Fished and Gear 2010

Assessment:
The SAFIS Data Warehouse stores dealer data from state and federal commercial fishing mandatory reports (eDER) and state catch & effort logbooks (VTRs) (eTRIPS). The dealer data from this warehouse is uploaded into the Northeast Regional Office (NERO) Commercial Fisheries Database System (CFDBS). The above data entry systems represent the best available information. Problematic is the accuracy of the data self-reporting by the industry participant's i.e. commercial fishermen and seafood dealers. Clerical errors and omission of information occur. Improved and complete data remedial educational programs can address this issue.

Federal Vessel Permit List

Percent of Home-ported Vessel Landings (Pounds) by State
Makeup of the RI Home-Ported Fleet
Vessels claiming RI as Home-Port State
Vessels claiming RI as Primary Port State
RI Commercial Fishing Fleet Summary

Assessment:
The database is comprehensive and allows for specific data queries relative to information needs.

Office of Science and Technology NOAA Fisheries – Commercial Fisheries Landings
http://www.st.nmfs.noaa.gov/st1/commercial/index.html

Assessment:
This is a useful database for reporting historical trends representing the best available non-confidential data.

RI Commercial Fishing Fleet Summary

RI DEM License Database
RI DEM Vessel Declaration List
RI Active vs. Non-Active Licenses 2010

Assessment:
The above database is both current and inclusive. There is some duplicity relative to licensees that if corrected would provide a more accurate estimate of individual fishermen. Again, as with all data, accurate and complete compliance with requested information is necessary for improved data.

The Economic Contributions of Seafood Landed (Econometric Model) 2010 Data
https://www.st.nmfs.noaa.gov/pls/apex32/f?p=160:7:1448765706531435::NO

Examples of Economic Impacts
Multiplier Effects Per Dollar of Ex-vessel Revenue Landed in Rhode Island
Contribution of Rhode Island Landings to the State's Economy in 2010
Multiplier Effects Per Dollar of Ex-vessel Revenue Change in Rhode Island 2008
Economic Contributions to Rhode Island from the American Lobster, Loligo Squid and Summer Flounder Commercial Fisheries 2010
Economic Impacts of the Rhode Island Seafood Industry (thousands of dollars) 2009

Assessment:
The econometric model is a useful, but limited tool based on present inputs.

Fisheries Economics of the United States

Average Annual Price for Finfish and Shellfish 2006-2010
Average Annual Price Trends for Selected Species 2006-2010

Assessment:
The Fisheries Economics of the United State is a useful, but limited tool based on present inputs and delayed availability.

Summary of NMFS Generated Reports that include Rhode Island Seafood Processing Data

Industry/Data Needs	Approach	Time Cost
Volume and value of finfish and shellfish landed in other states and shipped to RI	Annual R.I. survey of seafood wholesale/processed	
Volume and value of foreign imports and exports of fish and seafood by RI establishments	same as above	
Sales, payroll and employment data for wholesalers and processors and retailers	Survey (as above) special data run for wholesalers processing and retaining industries from the US Bureau of the Census	T.B.D.
Expenditure data for R.I. commercial fishermen	Primary data collection for more detailed expenditure data on what is purchased and when it is purchased	T.B.D.
Vessel performance monitoring by fishery, gear type and vessel size	Query federal VTR and state catch & effort data establish working focus groups by related categories	T.B.D.
Flow study of		

Assessment:
The comparative disparity in the reported information on Rhode Island seafood processing and is mainly attributable to the variability in the data sets, varying data years and limited data input sources. The result is an incomplete and extremely under valued estimate of the Rhode Island seafood processing sector.

Appendix (C)
Description of Selected Data Sources

1. RI Dept. of Environmental Management
   http://www.dem.ri.gov/pubs/regs/regs/fishwild/rimftoc.htm
   Contact: Daniel Costa – Dan.Costa@dem.ri.gov
   Contact: Thomas E. Angell – Thomas.Angell@dem.ri.gov

2. RI State Agencies and Dept.
   RI.Gov, Dept. of Revenue, Economic Dev. Corp., RIEDC, RI Dept. of State, USDA state HACCP

3. RI Ocean Special Area Management Plan RI (OCEANSAMP)
   http://seagrant.gso.uri.edu/oceansamp/samp.html
   Contact: David Beutel - dbeutel@crmc.ri.gov
   Contact: Tiffany Smythe - tsmythe@crc.uri.edu

4. RI Industry Organizations
   -Commercial Fisheries Center of RI (CFCRI), RI Commercial Fishermen's Association, RI
   -Lobstermen's Association, RI Fishermen's Alliance, RI Shellfishermen's Association, American Alliance of Fishermen and their Communities (contact: Tina Jackson (401) 837-6932), etc.

5. Institutions or Higher Learning – URI Marine Affairs, Oceanography, Roger Williams University, RI Sea Grant Fisheries Extension Program

6. US Department of Commerce NOAA/NMFS – NOAA technical memorandum 2010 Community Profiles Northeast Fisheries US Fisheries (RI port profiles).
   http://www.nefsc.noaa.gov/read/socialsci/community_profiles/
   Contact: Patricia Clay patclay@noaa.gov

7. Department of Commerce NOAA/NMFS – NOAA technical memorandum 2011 Trends in Selected NE Region Marine Industries 2009 (RI fisheries employment).
   Contact: Eric Thunberg

8. US Census 2010 - http://2010.census.gov/2010census/

9. NOAA Fisheries Region Permit Data Contacts: Joan Palmer joanpalmer@noaa.gov
   Walter Anoushian walteranoushian@noaa.gov (NMFS Port Agent 83 State St. 2nd Floor, Narragansett, RI) http://www.nero.noaa.gov/permits/data/ http://www.nero.noaa.gov/permits/display/

10. Fisheries of the United States (NOAA published annually)
    http://www.st.nmfs.noaa.gov/st1/publications.html

11. Atlantic Coastal Cooperative Statistics Program (ACCSP) – SAFIS
    http://safis.accsp.org/
    Contacts: Mike Cahall & Karen Holmes (703) 842-0780
12. Other Federal Agencies and Departments

FDA - http://www.fda.gov/ Contact: Mary B. Yebba mary.yebba@fda.hhs.gov (781) 596-7730
USDA/HACCP-
http://www.fda.gov/food/foodsafety/hazardanalysiscriticalcontrolpointshaccp/default.htm
Contact: Dr. Lori Pivarnik pivarnik@uri.edu (401) 874-2972
ASMFC - http://www.asmfc.org/ Contact: John V. O'Shea, Executive Director (703) 842-0740
Dept. of Commerce - http://www.commerce.gov/
IRS - http://www.irs.gov/
Congressional Offices - http://www.house.gov/
NSF Pioneer Array Offshore Observatory

13. Project Steering Committee: RI Senate policy office, RIDEM, NMFS, RIEDC, CFRF Board Directors

14. Industry Surveys and Interviews – Industry

15. Fishery Management Council/Fishery Management Plans (FMPs)
www.nefmc.org – contact: Paul J. Howard, Executive Director P: (978)465-0492
www.mafmc.org – contact: Christopher M. Moore, Executive Director P: (302)674-2331

16. NOAA/NMFS Northeast Fisheries Science Center http://www.nefsc.noaa.gov/ - contact: Drew Kitts drewkitts@noaa.gov , Earl Meredith earlmeridith@noaa.gov, John Hoey johnhoey@noaa.gov

Appendix (D)

Glossary

Buyback Program
A management tool available to fishery managers intended to ease fishing-related pressure on marine resources. Fishing vessels are purchased by the government or by the fishing industry itself then removed from a specific fishery where fish stocks or stock complexes are considered overfished or subject to overfishing.

Bycatch
Species other than the primary target species that are caught incidental to the harvest of the primary species. Bycatch may be retained or discarded; discards may occur for regulatory or economic reasons.

Catch
To undertake any activity that results in taking fish out of its environment dead or alive, or to bring fish on board a vessel dead or alive; 2.The total number (or weight) of fish caught by fishing operations. Catch should include all fish killed by the act of fishing, not just those landed; 3.The component of fish encountering fishing gear, which is retained by the gear. Catch is usually expressed in terms of wet weight. It refers sometimes to the total amount caught and sometimes only to the amount landed. The fish which are not landed, but returned to the sea, are called discards or bycatch.

Catch Share Program
This is a generic term used to describe a fishery management program that allocates a specific portion of the total fishery catch to individuals, cooperatives, communities, or other entities including sectors. The term encompasses more specific programs defined in legislation such as Limited Access Privilege Programs and Individual Fishing Quotas. Note that a catch share allocated to a sector is different than a general sectoral allocation or distribution to an entire segment of a fishery (such as a recreational sector allocation or a longline gear sector allocation) because the recipient of the catch share is responsible for terminating fishing activity when their specific share is reached.

Coastal County
A coastal county meets one of the following criteria: 1) at least 15 percent of a county's total land area is located within the Nation's coastal watershed; or 2) a portion of or an entire county accounts for at least 15 percent of a coastal cataloging unit. Any U.S. county that meets these criteria is classified as coastal.

Commercial Fishing Industry – to be identified

Discards
To release or return a fish or other species to the sea, dead or alive, whether or not such fish or other species are brought fully on board a fishing vessel.
Estimates of discards can be made in a variety of ways, including samples from observers and logbook records. Fish (or parts of fish) can be discarded for a variety of reasons such as having physical damage, being a non-target species for the trip, and compliance with management regulations like minimum size limits or quotas.

Economic Impact Model
Economic impact models capture how sales in a sector generate economic impacts directly in the sector in which the sale was made and then ripple throughout the state and national economy as each dollar spent generates additional sales by other firms and consumers. The NMFS Commercial Fishing & Seafood Industry

Input / Output Model uses an IMPLAN platform to estimate the economic impacts associated with the harvesting of fish by U.S. commercial fishermen and the other major components of the U.S. seafood industry. As used here, the term fish refers to the entire range of finfish, shellfish, and other life (that is, sea urchins, seaweed, kelp, and worms) from marine and freshwaters that are included in the landings data maintained by the National Marine Fisheries Service.

Ecosystem (modeling/approach to fisheries management) – to be identified

Effort
The amount of time and fishing power used to harvest fish in commercial fisheries, including gear size, boat size, and horsepower.

Ex-vessel
Refers to activities that occur when a commercial fishing boat lands or unloads a catch. For example, the price received by a captain (at the point of landing) for the catch is an ex-vessel price.

Fish Stock
A fish stock refers to the living resources in the community or population from which catches are taken in a fishery. Use of the term fish stock usually implies that the particular population is more or less isolated from other stocks of the same species and hence self-sustaining. In a particular fishery, the fish stock may be one or several species of fish but here it is also intended to include commercial invertebrates and plants.

Fishery Management Council (FMC) or Regional Fishery Management Council
A regional fisheries management body established by the Magnuson-Stevens Act to manage fishery resources in eight designated regions of the United States.

Fishery Management Plan (FMP)
A document prepared under supervision of the appropriate fishery management council (FMC) for management of stocks of fish judged to be in need of management. The plan must generally be formally approved. An FMP includes data, analyses, and management measures; 2. A plan containing conservation and management measures for fishery resources, and other provisions required by the Magnuson-Stevens Act, developed by fishery management councils or the Secretary of Commerce.

Fishing Community
The term is defined as "a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs" including various fishery participants based in such community.

Fishing Effort
The amount of fishing gear of a specific type used on the fishing grounds over a given unit of time. For example, hours trawled per day, number of hooks set per day, or number of hauls of a beach seine per day. When two or more kinds of gear are used, the respective efforts must be adjusted to some standard type before being added.

Gentrification Scale – to be identified

Harvest
The total number of weight or fish caught and kept from an area over a period of time. Note that landings, catch, and harvest are different.

Harvesting Capacity–
The capability of one or more specific vessels to catch fish and it measures harvesting capacity in terms of their potential pounds or tons of catch, and not in terms of the number, size or horsepower of those fishing vessels.

Infrastructure – to be identified

Individual Fishing Quota (IFQ)
A type of limited entry, an allocation to an individual (a person or a legal entity, for example, a vessel owner or company) of a right [privilege] to harvest a certain amount of fish in a certain period of time. It is also often expressed as an individual share of an aggregate quota, or total allowable catch (TAC). See also "Individual Transferable Quota" and "Catch Share Program."

Individual Transferable Quota (ITQ)
A type of individual fishing quota (IFQ) allocated to individual fishermen or vessel owners that can be transferred (sold or leased) to others.

Fishery Sector– as a group of persons holding limited access vessel permits under the fishery management plan through which the sector is being formed, who have voluntarily entered into a contract and agree to certain fishing restrictions for a specified period of time, and which have been granted a total allowable catch (TAC) in order to achieve objectives consistent with the applicable FMP goals and objectives.

Landings
1. The number or poundage of fish unloaded by commercial fishermen. Landings are reported at the locations at which fish are brought to shore; 2.The part of the catch that is selected and kept during the sorting procedures on board vessels and successively discharged at dockside.

License Limitation Program or Limited Entry Program
A management tool available to fishery managers where the number of commercial fishermen or vessels licensed to participate in a fishery is legally restricted. A management agency often uses this management tool as a means of limiting entry into a fishery.

Magnuson-Stevens Fishery Conservation and Management Act or Magnuson-Stevens Act (MSA)
Federal legislation responsible for establishing the Regional Fishery Management Councils (FMCs) and the mandatory and discretionary guidelines for federal fishery management plans (FMPs). This legislation was originally enacted in 1976 as the Fishery Management and Conservation Act; its name was changed to the Magnuson Fishery Conservation and Management Act in 1980, and in 1996 it was renamed the Magnuson-Stevens Fishery Conservation and Management Act.

Overcapacity
Overcapacity refers to a situation where the harvesting capability within a given fishery exceeds the level of harvest allowed for that fishery.

Overfished
1.An overfished stock or stock complex "whose size is sufficiently small that a change in management practices is required to achieve an appropriate level and rate of rebuilding." A stock or stock complex is considered overfished when its population size falls below the minimum stock size threshold (MSST). A rebuilding plan is required for stocks that are deemed overfished; 2. A stock is considered "overfished" when exploited beyond an explicit limit beyond which its abundance is considered 'too low' to ensure safe reproduction. In many fisheries the term is used when biomass has been estimated to be below a limit biological reference point that is used as the signpost defining an "overfished condition."

Processing Capacity – to be identified

"Processed Products or Seafood Products." - Any fish, shellfish or crustacean that has been processed on board a fishing vessel prior to sale to a licensed dealer.

Processing
The preparation or packaging of fish to render it suitable for human consumption, retail sale, industrial uses, or long-term storage, including but not limited to cooking, canning, smoking, salting, drying, filleting, freezing, or rendering into meal or oil, but not heading and gutting unless additional preparation is done.

Capacity
1. The ability to sustain, harvest, hold, or process; 2. The maximum amount that can be produced per unit of time with existing plant and equipment, provided the availability of variable factors of production is not restricted.
http://www.nmfs.noaa.gov/fishwatch/glossary.htm

Protected Species
Refers to any species which is protected by either the Endangered Species Act (ESA) or the Marine Mammal Protection Act (MMPA), and which is under the jurisdiction of NOAA Fisheries (NMFS). This includes all threatened, endangered, and candidate species, as well as all cetaceans and pinnipeds, excluding walruses.

Sector Allocation Program
A fisheries management tool where a group of fishermen are allocated a quota or share of a total allowable catch, in accordance with an approved plan. It is considered a type of catch share program. See also “Catch Share Program.”

Appendix (E)

R.I. Commercial Fishing Industry Profile

Seafood Dealer/Processor Questionnaire

The Cornell Cooperative Extension Marine Program (CCE) has partnered with the Commercial Fisheries Research Foundation (CFRF), a Rhode Island based, fishing industry supported organization, to develop an up-to-date profile of the Rhode Island commercial fishing industry. The profile will include all fishing sectors active in Rhode Island and will characterize the harvesting and processing capacity of the industry, support businesses, and people engaged in this livelihood. Moreover, the profile will assess the overall significance of the commercial fishing industry on local, state and regional economies. This survey is specific for crew members of the commercial fishing industry. The purpose of this questionnaire is to gain a general understanding and a current assessment of the R.I. seafood dealer and processor sector. Questionnaires are administrated by a member of the project team and all information provided will be considered confidential and pooled for descriptive purposes.

Summary of 18 seafood dealers/processors response's are listed below:

Volume and value of finfish and shellfish distributed/processed in 2010?
-Volume 153,603,034 total lbs.
-Value $144,575,997 total USD.
-Primary species (list) Lobster, skate, monk, summer flounder, cod, squid, sea bass, striped bass, scup, tautog, conch, hard shell clams, soft shell clams, sea scallops, oysters, mussels, Jonah crab, blue crab, horseshoe crab, mackerel, northern quahog, ocean quahog, surf clams, snail, hagfish, tuna, whiting.

Volume and value of finfish and shellfish landed in other states and shipped to your company for distribution and/or processing in 2010?
-Volume 42,245,609 total lbs.
-Value $28,130,559 total USD.
-Primary species (list) Swordfish, salmon, tuna, flounder, mahi, cod, haddock, clams, squid, black cod, ocean quahog, surf clams, skate, dogfish, squid.

Sales destination of distributed or processed seafood in 2010 (All product)?
RI 24% **Northeast** 43% **Export** 9 % **USA** 91%

Number of employees: Full time 424 total **- Part time** 117 total

Employee residence relative to worksite? 0-10 miles 33% **10-20 miles** 46% **beyond 20 miles** 21%

Educational level required (for production workers)? None 14 total **- High School** 4 total

How much of your facility's capacity is being utilized on an annual basis?
100% 7 total **75%** 5 total **50% or less** 6 total

If less than 100%, what is the major improvement(s) ex: labor, raw product, regulations, operational cost, infrastructure needs (waste water treatment, bulkhead repair, channel depth)?
-Regulations 5 total **Lack of product** 6 total **Cost of business** 3 total **Infrastructure** 2 total

What is the general condition of the infrastructure supporting your company operation?

Bulkhead	**Good**	46%	**Average**	8%	**Poor** 46%
Channel dredging	**Good**	82%	**Average**	9%	**Poor** 9%
Vessel slips	**Good**	73%	**Average**	0%	**Poor** 27%
Utility service	**Good**	82%	**Average**	0%	**Poor** 18%

Do you have on site freezing and cold storage? Yes 11 total **No** 7 total
If yes, what capacity (i.e. per day, storage).
If no, do you use public cold storage/freezing services?
- Cold Storage 1,800,000 lbs./day total **Freezing** 724,000 lbs./day total

Do you provide delivery services? Yes 17 total **No** 1 total
If yes, how? Truck 17 total **Rail** 1 total **Air** 2 total
Company owned transportation (describe) Prey, Tidewater, Express, Fleet, Seacap, Boston-buffalo, American Airlines, Bill & Deb Harrison, Bar Beck Trans., Fresh Fish West, NWD, H&M
Or common carriers? (Name)

What type of marketing/promotion programs do you conduct? (ex) Website, sales promotions, seafood shows, seafood trade publications, brokers, company sales staff, (other)

- **Print Advertising** 6 total **Website** 9 total **Company Sales Staff** 6 total **Brokers** 3 total
- **Seafood Shows** 6 total **Seafax** 1 total **Word of Mouth** 1 total **Regular Customer Base** 1 total

Would a generic R.I. seafood promotion program be useful to your company? Yes 13 total **No** 5 total
If yes, would your company financially support this program? Yes 8 total **No** 10 total

Do you participate in seafood inspection programs? Yes 17 total **No** 1 total
If yes, please list. HACCP, BRC, Silliker Inc.

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Cornell University Cooperative Extension of Suffolk County

Appendix (F)
Fisherman Survey

The Cornell Cooperative Extension Marine Program (CCE) has partnered with the Commercial Fisheries Research Foundation (CFRF), a Rhode Island based, fishing industry supported organization, to develop an up-to-date profile of the Rhode Island commercial fishing industry. The profile will include all fishing activity in Rhode Island and will characterize the harvesting and processing capacity of the industry, support businesses, and people engaged in this livelihood. Moreover the profile will assess the overall significance of the commercial fishing industry on local, state and regional economies. This survey is for RI commercial fishermen. This survey is anonymous and you may choose to skip any questions.

Summary of 22 seafood Fishermen's response's are listed below:

1. **How many years have you been a commercial fisherman?** 29 years (average)

2. **What is your principal fishery?(ex. groundfish, lobster, shellfish)**
   Ground Fish 7 total **Finfish** 1 total **Tuna** 1 total **Shellfish** 10 total
   Multispecies 1 total **Lobster** 1 total **Small Mesh** 1 total **Mixed** 1 total

3. **What is your principal gear type? (ex. trawl, gillnet, hook & line, pound traps, lobster pots, fish pots)**
   Hook and line 4 total **Trawl** 6 total **Dive** 2 total **Bull rake** 8 total
   Gill net 1 total **Pots** 1 total **Trap** 1 total

4. **What other type of fishing do you conduct? (Target species)**
   Shellfish 1 total **Summer flounder** 2 total **Cod** 1 total **Conch** 1 total
   Blue Fin Tuna 1 total **Scup** 1 total **Black Sea Bass** 1 total **Trap** 1 total
   Striped bass 1 total **Tautog** 1 total **Rod and Reel** 2 total **Squid** 2 total
   Groundfish 1 total **Oyster Farm** 1 total **Yellow Fin Tuna** 1 total

5. **Do you own a commercial fishing vessel?** **Yes** 21 total

6. **If yes, what is the year the vessel was built, the length, horsepower, construction material of the vessel and the gear types used (rake, dredge, fish pot, handline, etc.)?**
   (Average) Vessel - Age 20 years **Length** 34 feet **Horsepower** 246 hp.

7. **Do you hold endorsements on your RI commercial fishing licenses? Yes** 16 total **No** 6 total
   If yes, please list.
   Multipurpose 7 total **Striped bass, Fluke, Scup, Black sea bass** 2 total **Mid-water** 1 total
   Restricted Finfish 1 total **PNFIN & PRFIN** 1 total **Scallop, Mussels, All shellfish** 1 total
   Soft shell, conch 1 total **Pair Trawl** 1 total **Seine** 1 total **All** 1 total

8. **Do you hold a Federal vessel permit(s)? Yes** 10 total **No** 12 total
   If yes, please list.
   Party/charter 1 total **Fluke, scup, black sea bass, squid** 1 total **Multipurpose** 1 total

9. **Do you have vessel insurance?** **Yes** 15 total **No** 7 total

10. How many crewmen work on your vessel?
0 crew 8 total **1 crew** 5 total **2 crew** 5 total **3 crew** 3 total **4 crew** 0 total
5 crew 1 total

11. Has fishing effort increased or decreased from 2008-present?
Increased 7 total **Decreased** 7 total **Same** 8 total
Reasons for increase/decrease (list) - Regulations, not enough allocation, supplemental income gone, cost of living increase, decreased landings, no lobster, catch shares.

12. What percent of your personal/household income is derived from commercial fishing income?
100% 7 total **75%** 2 total **50% or less** 13 total
If less than 100%, do you supplement income from other areas within the fishing industry/other non-fishing industries? (Ex. landscaper, carpenter, clam digger, etc.) Yes 11 total **No** 11 total
If yes, please list. Clam Digger, Computer Consulting, Charter Boat, Scrap metal, Horse farm, Pension plan, Public works dept., Family members.

13. What is your primary port of landing? (in terms of frequency or the most recently used)
Warwick 4 total **Trailer** 1 total **Pt. Judith** 8 total **Newport** 2 total **East Greenwich** 7 total

14. What is the distance from the above port to your residence? 15.5 miles (average)

15. **Do you land fish/shellfish in non-RI ports? Yes** 4 total **No** 18 total
If yes, where? New Bedford, Fall River, MA / Wanchese, NC / Newport news, VA / Cape May, NJ

16. What is your education level?
High school/high school equivalent 11 total **Associates degree** 4 total
Bachelor's degree 3 total **Masters degree or higher** 2 total

17. Do you belong to any type of fishermen's organization? Yes 10 total **No** 12 total
If yes, please name.
RICRRA, RI Summer Flounder Assn. (RISFA), National Association of Charter boat Operators (NACO), RI Party & Charter Boat Assn. (RIPCBA), RI Shellfish Assn., RI Saltwater Anglers Assn. (RISAA), American Alliance of Fishermen and their Communities, RI Commercial Fisherman Assn., RI Fluke Coop., Groundfish sector V.

18. Do you have health insurance? Yes 19 total **No** 3 total

R.I. Commercial Fishing Industry Profile
Crewmen Survey

The Cornell Cooperative Extension Marine Program (CCE) has partnered with the Commercial Fisheries Research Foundation (CFRF), a Rhode Island based, fishing industry supported organization, to develop an up-to-date profile of the Rhode Island commercial fishing industry. The profile will include all fishing sectors active in Rhode Island and will characterize the harvesting and processing capacity of the industry, support businesses, and people engaged in this livelihood. Moreover the profile will assess the overall significance of the commercial fishing industry on local, state and regional economies. This survey is specific for crew members of the commercial fishing industry. This survey is anonymous and you may choose to skip any questions.

Summary of 56 crewmen's response's are listed below:

How many years have you been involved in commercial fishing as a crew member? 23.5 years (average)

What is your age? 43.6 years (average)

What is your race/ethnicity?
Caucasian 53 total **African American** 2 total **Hispanic** _____ **Asian** _____ **Other** 1 total

What fishery does the primary vessel you are a crew member on participate in? (Ex. groundfish)
Squid/mackerel/butterfish 25 total **Lobster** 13 total **Skate** 3 total
Groundfish 13 total **Black Sea bass / Scup** 4 total **Monkfish** 3 total
Whiting 1 total **Summer flounder** 1 total **Mixed/all** 3 total
Shellfish - scallops/hard clam 13 total

What is the gear type for the primary vessel you are a crew member on use? (Ex. trawl)
Trawl 35 total **Pots** 10 total **bull rake** 2 total **Dredge** 11 total **Gillnet** 5 total **Traps** 2 total

How long have you been a crewman on the above vessel? 8.2 years (average)

What percent of your personal/household income is derived from commercial fishing income?
100% 38 total **75%** 15 total **50% or less** 3 total

Do you receive your fishing income on a crew share basis? **Yes** 52 total **No** 4 total

For the last year, did you normally work full-time or part-time as a crew member on a fishing vessel?
Full-time 49 total **Part-time** 7 total

If you are a part-time crew member, do you supplement income from other areas within the fishing industry/other non-fishing industries? (ex. landscaper, carpenter, clam digger, etc.)
Yes____ **No**____
If yes, please list. Food service, landscaper, snow removal, clam digger, boat upholstery, fish processor, musician.

In the last year, what port did you normally fish from?
Pt. Judith 40 total **Davisville** 4 total **Newport** 4 total **East Greenwich** 2 total
Snug harbor 1 total **Cape may, NJ** 1 total **Manasquan, NJ** 1 total

What is the distance from the above port to your residence? 23 miles (average)

What is your education level?
High school/high school equivalent 38 total **Associates degree** 5 total **Bachelor's degree** 9 total
Masters degree or higher 1 total **None** 3 total

Do you hold any RI commercial fishing licenses? **Yes** 32 total **No** 24 total
If yes, please list. **Commercial Fishing License** 9 total **Multi-purpose** 20 total **All** 5 total

Do you hold a Federal vessel permit(s)? **Yes** 17 total **No** 39 total
If yes, please list.
Northeast Multispecies 6 total **Scup** 2 total **Squid, Mackerel, Butterfish** 3 total **All** 3 total
Lobster 5 total **Fluke** 2 total **Red crab** 1 total **Skate** 1 total **Scallop** 2 total
Black Sea Bass 1 total **Tuna** 1 total

Do you have health insurance? **Yes** 23 total **No** 33 total

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